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Clinical Lectures.

ECLAMPSIA.*

By DR. ROBERT OLSHAUSEN,
BERLIN, GERMANY.

Gentlemen:—Eclampsia is a disease which for a long time past has commanded great interest from physicians; its obscure origin being by no means the smallest cause for such being the case.

An elucidation of its ætiology, in all probability, will not be by means of clinical research, but rather through experimental methods or chemical examinations of the blood and secretions. Nevertheless, it will be necessary for any theory of the genesis of the disease not to clash with its clinical manifestations, but, rather in the principal points at least, to coincide with them.

I have at hand the histories of two hundred cases of eclampsia, occurring between September 1st, 1885, and April 17th, 1891, at the Royal University's Women's Clinic here in Berlin. After a revision of the clinical manifestations observed in these cases, I will review comparatively the present theories regarding the genesis of the disease.

The two hundred cases upon which I base my observations and conclusions occurred during 2,054 days. This would mean one case in every ten and one-third days, or on an average of three cases in one month.

It has been frequently observed that cases of eclampsia occur in "bunches," and the following table will elucidate this. They occurred as follows:

In 1886, from July 22 to August 15, or in 25 days, 7 cases; from Sept. 12 to Sept. 25, or in 14 days, 5 cases. In 1888, from Oct. 8 to Oct. 23, or in 16 days, 7 cases; from Nov. 22 to Dec. 28, or in 37 days, 8 cases. In 1889, from Jan. 4 to Jan. 18, or in 15 days, 6 cases; from Dec. 5 to Dec. 31, or in 27 days, 8 cases. In 1890, from Feb. 4 to Feb. 28, or in 25 days, 6 cases; from June 22 to July 2, or in 11 days, 8 cases; from July 9 to July 24, or in 16 days, 8 cases; from Oct. 2 to Oct. 15, or in 14 days, 6 cases; from Dec. 5 to Dec. 30, or in 26 days, 6 cases. In 1891, from Jan. 6 to Jan. 29, or in 24 days, 6 cases.

When one remembers that the average number of cases would only be three in one month, one can see how that many of the cases occurred within a short time of each other. This list includes 81 of the 299 cases. It is remarkable also that the most of this "bunching" of cases occurred between the months of October and February. In the above list, between March and August there occur only 16 cases; all the rest occur between September and February, or 65 cases.

Nevertheless, this occurrence of cases at certain times of the year is in part accidental, for if I included all the other cases in this division (193) we would find the difference no longer marked; 88 falling between the months of March and August, and 105 between September and February. Yet this periodical "bunching" of cases seems so remarkable that I cannot regard it merely as accident or coincidence. No explanation can be given for this. The changes of temperature or weather cannot be responsible.

Among the writers on the subject of eclampsia, Delore* is the only one, apart from myself, who has noticed this peculiarity.

Regarding the ætiological factor of the disease, I can only offer additional con-

*Delivered in part before the Berlin Medical Society, December, 1891. Translated from *Volkmann's Collection of Clinical Lectures.*

* Delore, *Lyon Medical* 10, XII., 1884.

firmation to the well-known facts that experience has already taught us.

Among the 200 parturients affected with eclampsia, 145 were primiparæ and 51 multiparæ; the birth number in four cases was not known.

The proportion of primiparæ, according to my own observations, was 74 per cent; Löhlein gives this proportion as 85.4 per cent.* and 75 per cent.;† Schauta gives it as 82.6 per cent;‡ Brummerstadt as 80.5 per cent, ‖and C. Braun as 86.3 per cent.§

Among the primiparæ there were no less than 37 subjects of 28 years or over. The percentage of "old primiparæ being 25 per cent. Löhlein gives a percentage as 29 per cent.

Of the multiparæ 32 had borne two to four children, while 19 had given birth to five or over. These included 5 who had borne ten or eleven times.

Among the 200 cases there were 16 cases of twins, making 8 per cent. instead of the usual proportion of 1¼ per cent. in normal births. Löhlein gives the percentage of twins in eclampsia as 4.7 per cent.,** Winckel as 11 per cent.†† and Schauta as 7.9 per cent.‡‡

Regarding the number of patients taken with eclampsia during pregnancy before labor, I would not care to give any figures as a result of my own experiences. Nearly all the patients that came under my care had had more or less numerous attacks before being brought to the clinic, and the most of them were in labor. Lohlein considers that 4.7 per cent. develop the disease during pregnancy; Schanta places this number at 14 per cent. Winckel at 23 per cent. and Braun at 24 per cent. The cause of difference in these figures is easily understood, when one stops to consider that at the time of the physician's examination it is often impossible to determine with positiveness if the birth was already underway or not. With but very few exceptions the birth and eclampsia begin within a short time of each other.

According to my belief the high percentage of Braun comes nearest the truth, but it is also too low. An examination of the fœti born eclamptically will make this almost a certainty. When we regard the number that are reported as premature births, or accept as such all children weighing less than 2,250 grammes (less than 2000 grammes for twins) still the true number of premature births will be underrated. Nevertheless out of 161 in which I was able to make this investigation, 49 were found to be premature, or 30 per cent.

In the majority of these cases both the weight and length of the fœtus was so small that even the eighth month of pregnancy could not have been reached. Only 5 out of those specified as premature births, ever reached the weight of 2000 grammes. It seems, therefore, that the percentage of 30 per cent., is far too small, and that the actual number of premature births would reach to 40 per cent. or over. This can be easily explained by the frequent occurrence of the disease during pregnancy, and the then almost immediate occurrence of labor.

This fact is of great importance in the consideration of the various theories that have been advanced concerning eclampsia. But at present it is not sufficiently well known or authenticated. Yet, in Fenstell's* dissertation on the subject we find that in 80 cases of eclampsia he regarded the percentage of premature births as 37.75 per cent.

I will also state that I have observed eclampsia in the third and fourth months of pregnancy.†

The percentage of *sensu strictori* in puerperal eclampsias can be accurately determined. Among these should be included all those cases occurring during the after-birth period. So, among my 200 cases, I found a percentage of 14 per cent. Similarly, Winckel found 17 per cent.; Löhlein, 23 per cent.; Schauta, 26.4 per cent., and C. Braun, 24 per cent.

Among my cases there were five in which the eclampsia occurring during pregnancy passed without causing the birth of the fœtus. But all five—partly at home and

*Lohlein *Zeitschrift f. gebh. und Gyn.* Vol iv, p 88.

†Lohlein *Gynæk Tagesfragen,* Vol ii p 81.

‡Schanta *Archiv. f. Gyn.*, Vol xviii p 263.

‖Brummerstadt, Bericht and Rostocker Hebammanlehranstalt, 1865.

§C. Braun, Braun, Chierian Spath's Obstetrics.

**Löhlein, *Gyn. Tagesfragen.*

††Winkel, *Lehrbuch der Gebutshülfe* 1889, page 580.

‡‡Shauta, *Arch. Gyn.*, Vol. xviii, page 263.

*See Maye, *Dissertation,* Halle, 1869; Cases I and III.

†Berlin, May 4, 1888.

partly at the clinic—gave birth to macerated fœti later on, but without any recurrence of the eclamptic attacks. Our cases have shown that if eclampsia occurs during pregnancy and passes without causing the eruption of the fœtus, it will not recur again at the birth of the fœtus.

It usually occurs in connection with the death of the fœtus,* and from this fact the theory may be deducted that eclampsia may be due to an intoxication produced from the living fœtus. Against this theory, however, is the fact that in many cases eclampsia does not occur for a half a day or longer after the birth of the child; and, apart from this also, from the fact that it not infrequently occurs until long after the death of the fœtus in the womb.

Among my cases such an one occurred. The patient was a primipara, thirty-two years old, who after four eclamptic attacks, occurring on August 7, gave birth to a greatly macerated fœtus on August 10. The woman was in the eighth month of pregnancy. After two more attacks, one on August 17 and 18, respectively, the patient recovered. The urine contained large quantities of albumin, cylinders, and renal epithelium. The treatment consisted in the exhibition of 0.03 gramme of muriate of morphine after the fifth, and 0.06 gramme after the sixth attack, and also 3.0 grammes of chloral by the rectum, in injection.

Braun has also reported two cases of eclampsia occurring when the fœtus was already macerated. That after the death of the fœtus the eclampsia does not recur at its subsequent birth, may be explainable by the almost constant and rapid decrease of the volume of the uterus after its death.

Although the return of eclampsia, which has ceased for twenty-four hours, is rare it occasionally occurs, nevertheless. We had experience with such a case. The patient was a primipara, twenty-one years old, who on the day of the birth of a living, yet undeveloped child (weighing 1,360 grammes and measuring 40 centimetres in length), on May 24, 1887, had several eclamptic attacks. The treatment consisted in the administration of 0.02 gramme of morphine and 3.0 grammes of chloral. The eclampsia returned on May 31, the seventh day after the birth of the fœtus. At this time she had two attacks. Morphine in 0.04 gramme doses was given. Eight days later (June 8) she again had a single attack. The urine was rich in albumin (two-thirds of its volume), and contained also many hyaline and granulated cylinders. The patient recovered.

Another similar case I experienced in former years. In the case in question, after eleven eclamptic attacks of puerperal eclampsia there occurred a cessation of the disease for thirty-six hours. Then, after a palpation of the uterus, a thirteenth and fourteenth attack occurred and, twenty-four hours later, again after the palpation of the uterus, the fourteenth attack. This was followed by additional convulsions, occurring the one after the other, until after the one hundred and fourth attack the patient died.

Leudet* also reported long ago, a case of eclampsia which passed, and the albuminuria even disappeared. Yet the disease returned again after a lapse of two months.

Return of eclampsia at a subsequent, or later child-birth is also a great rarity. Out of the 200 cases with which this article deals, the previous histories of only two cases, showed that they had suffered from eclampsia before. The one case was a secundipara, twenty-six years old, in which the first attack occurred thirty hours post-partum. The urine was highly albuminous. After a few attacks the urine was also found to contain blood-corpuscles, hyaline and granular cylinders. She ultimately recovered, after having eight attacks, which slowly followed each other during the course of twenty-four hours.

The second case was that of a woman, twenty-seven years old, who had given birth to five children. During the course of twenty-six hours, she had nine eclaptic convulsions. The urine was completely saturated with albumin, and hyaline cylinders. The eclampsia ceased, but the patient died twenty-four days later. At her first child-birth she had also had eclampsia.

I also recall a third case from my own practice, of return of eclampsia at a later birth. It occurred in a pregnant women, who had all the symptoms of an uncomplicated chronic interstitial nephritis. These symptoms included, copious diuresis,

* Winckel, *Lehrbuch der Geburtshülf*, 1889, page 587.

**Gazette Hebdom.* 1854, I, 28.

moderate albuminuria and hæmorrhages of the mucous membrane. There were no evidences of any acute process. The patient also recovered from the second attack of eclampsia, but died six months later from atrophy of the kidneys.

Lumpe* had occasion to observe eclampsia at the first, second, and fifth childbirth of the same woman.

I have little to add to the symptomatology of eclampsia. Regarding the prodroma, I would lay stress upon the frequency of the so-called "stomach-ache" together with the much more frequent, indeed almost constant, headache. The meaning of this gastric pain is entirely obscure to us. The symptom is, however, one of great importance; for in the advanced months of pregnancy, when associated with headache, almost may be regarded as a positive prognosis of eclampsia. At least such is our experience. This gastric pain might be explainable by the theory that some patholgical substance is brought into contact with the mucous membrane of the stomach, where it not only causes pain, but more frequently vomiting. This idea seems not to be without good foundation, especially when the experiments made in the Hitzig Clinic in Halle, are taken into consideration, and their discoveries applied in this case. Here it was found that after subcutaneous injections of morphine, the drug was partly secreted upon the mucous membrane of the stomach.

As a prodromal symptom, in one case I have seen amaurosis occur while consciousness still remained. Very soon after this the first eclamptic attack occurred.

Regarding the single later attacks, it is well known that they occur without any warning whatever. Neither can I recall any literature on the subject that says differently. It was all the more astonishing, therefore, that we observed three cases in which there was an undoubted *aura*. In the one case the patient was able to state most precisely that before the attack she felt a sensation of falling. Indeed, she once called out, "I am falling!" and immediately after a convulsion occurred. The same feeling was complained of by another patient—a case of puerperal eclampsia—only that she felt this sensation after the eclampsia had left her. In all she had twelve post-partum convulsions. Simultaneously with the sensations named she had ocular and aural hallucinations. Recovery ultimately resulted.

In the second patient with *aura*, this was still more remarkable. The case was that of a primipara, twenty-one years old, who had six post-partum eclamptic convulsions. She had the sensation of clonic spasms in the extremities and, indeed, simulated the characteristic movements of the arms similar to those observed during the convulsions prior to the attack. Yet, it was only before three of the attacks that she was able to give this index as to their advent. Before the other three she had no warning. In this case it may not have been so much a case of *aura* as that of maintenance of consciousness during the first part of the attack, and this would explain why, after the third attack, deep coma and no *aura* occurred. I need scarcely add that both of these cases were those of undoubted eclampsia. The first patient gave birth to twins and, prior to their birth, had seven convulsions in nine hours. The attacks were quite typical, and the urine contained large quantities of albumin. The patient recovered.

The third case was that of a multipara, twenty-five years old, who had given birth to three children. After an easy and spontaneous birth of twins, perhaps after the lapse of half an hour, the patient suddenly loudly called the name of her husband, and immediately afterwards had the first attack of eclampsia. An hour and a half later, after she had suddenly called out, "It's coming!" she had the second attack. After three subsequent attacks the eclampsia ceased. Even the next day the urine contained a large amount of albumin and a few hyaline cylinders. The second day after the eclamptic attacks the patient developed psychosis with delirium from the poisoning. These symptoms lasted two or three days, after which she made a good recovery.

Regarding the conditions of the urine, as found in the cases observed by me, these differed from those observed by some other investigators, in so far that an abnormal condition was much more constant; indeed, almost exceptionally present. Out of the histories of the 200 cases, in 32 cases nothing is said regarding the nature of the urine. This is partly explainable by the fact that in several cases even catheterization would fail to bring any urine from

*Braun's *Lehrb. d. gebh.* 1857, page 486.

the bladder. Out of the remaining 168 cases, in four cases only a very small amount of albumin, or, perhaps, only a trace, was found. All four were primiparæ; the one had only one attack; the second, three convulsions, ante-partum; the third, four convulsions, post-partum. All three could only be considered light cases. The fourth of these patients, however, who had hydramnion, had twenty-three cases in five and one-half days, and an hour and three-quarters after the last attack, was delivered by means of the forceps of a fœtus which had recently died. She recovered.

Entire absence of albumin was only observed in one case. The patient was a multipara (having given birth to seven children), forty years old, and had seven eclamptic convulsions.

In the remaining 163 cases the quantity of albumin in the urine was always considerable. In the large majority of these cases it was very copious, so much so that in a test-tube filled with urine the albumen would occupy half the space, or in some cases completely coagulated the entire bulk of the urine.

Fenstell* found albumin present in 79 out of 80 cases of eclampsia.

Unfortunately, I can say but little regarding the presence of formed elements in the urine, since the examination in this direction was often neglected, and still more frequently not noted. In 59 cases, in the histories of which these data are given, a negative finding occurred only in seven cases. In the remaining cases there were more or less greater numbers of sometimes hyaline and sometimes granulated cylinders. Often renal epithelial cells were found and, in four or five instances, blood corpuscles as well.

Regarding the presence of œdema, in 40 cases we have histories of its presence before the eclamptic attack. In 26 cases, according to the statement of the patients themselves, the œdema had appeared a few weeks previously; in 11 other cases it had existed for two or three months. In two cases the œdema is said to have been present for five months, and in one case even six months.

In the large majority of cases it was undoubtedly not the question of any long standing circulatory disturbance. This view of the case agrees with the usually tense nature of the œdema, together with the slight amount of swelling.

Icterus occurs but very rarely, and was observed in only two cases. The one case was a most severe one with fatal issue; the second was a lighter case, ten convulsions occurring after the birth of living twins, and the result being recovery. C. Braun recognizes the recurrence of icterus and speaks of a cholæmic eclampsia. Latterly, Stumpf has again called attention to this complication, which most probably is connected with a vascular rupture and hæmorrhage in the substance of the liver.

Before going on to a consideration of the pathological anatomy of the disease, I would say a few words on the loss of memory which I have noticed among patients recovering from eclampsia; occurring not only from the time of the first attack until the return of consciousness, but stretching into the period of convalescence, and often occurring a number of hours before the appearance of the disease.

In my experience, I met the patient whom I first saw twelve hours before the first attack and who, during a long consultation, talked most rationally and was in the full possession of her faculties. Yet, after her recovery from the eclampsia she had no recollection of either the consultation or other important events that occurred within twelve hours of the first attack.

This loss of memory might, under certain circumstances, be of legal importance.

(*To be continued in the next issue.*)

Loc. cit.

THE MANUFACTURE OF ARTIFICIAL ICE.

Ice was artificially produced in India long before the invention of machines for the purpose, a fact not generally understood. In the upper provinces, water was made to freeze by exposing it during cold nights, in porous vessels, or bottles wrapped in a moistened cloth. In Bengal, shallow pits were dug and filled nearly full with dry straw on which were set flat, porous pans containing the water tobe congealed. Exposed over night to a cool wind, the water evaporated at the expense of its own heat, and the consequent cooling took place with sufficient rapidity to overbalance the influx of heat through the cooled air above, or through the badly conducting straw below.

OPHTHALMIA NEONATORUM.

By C. A. VEASEY, M. D.

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A LECTURE BEFORE THE NURSE CLASS, THE MEDICAL STAFF, THE BOARD OF MANAGERS AND INVITED GUESTS OF THE PHILADELPHIA LYING-IN-CHARITY AND NURSE TRAINING-SCHOOL.

Ladies and Gentlemen.—When invited by the executive committee of your institution to deliver a lecture this evening upon "Ophthalmia, its causes prevention and treatment," I was in doubt as to whether I should attempt to treat of all the varieties of ophthalmia, or only of some particular variety that you would perhaps come in contact with more than any other; and after due consideration I arrived at the conclusion that it were better to talk of that variety which you will see more of as obstetrical nurses, so that you will recognize it when you see it and understand its causes, prevention and treatment.

The socket in which the eyeball is placed is lined by a mucous membrane known as the conjunctiva. This membrane commencing at the outer edge of the lids extends backward for a considerable distance, and is then reflected forward on the eyeball, that portion covering the lids being designated the palpebral conjunctiva, and that part covering the eyeball, the ocular conjunctiva. Now, ophthalmia is a disease of the eye, characterized by pain, redness, intolerance of light and excessive flowing of the tears, there being either a hyper-secretion or a genuine discharge, according to the variety; the inflammation for the most part being seated in the coats of the eyeball, or conjunctiva. The affection is sometimes known as conjunctivitis.

Varieties.—The varieties of ophthalmia are many, the chief among them being simple, muco-purulent, purulent, diphtheritic and phlyctenular, the difference between them being more the degree of inflammation than the character of it.

Simple, or as it is sometimes called palpebral conjunctivitis, is an inflammation of the palpebral folds of the conjunctiva, that portion which covers the eyeball itself not being affected. It is characterized by redness, intense itching, burning and a sensation as if small grains of sand were under the lids, causing a desire to rub the eye continually. The causes are numerous and varied—such as extremes of temperature, this being the case when people tell you they have taken cold in the eyes; foreign bodies, as pieces of coal dust or of shell which are blown into the eyes as one walks along the street; cinders from the locomotive of a railway train; exposure to a vitiated atmosphere—a room filled with tobacco smoke for example; loss of sleep, as I am sure many of you have experienced after you have been nursing a tedious case all night without having had your sleep on the previous day. And one of the chief causes is working without glasses when the eyes need them, or working with improperly fitted glasses. Indeed, we frequently have patients come to our offices complaining of nothing else but the burning sensation in the eyes, with agglutination of the lids upon waking in the morning, and almost always there is found some error of refraction which when corrected by proper glasses, the other symptoms disappear.

And these glasses should not be prescribed by an optician but by a skilled oculist, who has made a study of the eye from a medical and surgical standpoint—in other words, a graduated physician who has made a speciality of the diseases of the eye. It is frequently remarked by elderly persons that when they were young, glasses were not used nearly so much as now. To be sure they were not, but at that time there were not the educational advantages to be enjoyed as now. The child was not sent to school at so tender an age, and urged to work day and night in its endeavors to excel and gain a high degree of distinction. So many people did not gain a livelihood by the constant use of the eyes then as now. There were fewer professional men, fewer scholars—in other words, there was less eye work, and consequently less eye strain and glasses were not required.

The present age is one of push, energy and ability, and to obtain a position in, or near, the front ranks of the vast army of people who are constantly pushing forward in their endeavors to reach the highest mountain peak of success, requires much

persevering labor. It is almost impossible to attain any degree of distinction, in the present age, without at least a moderate general education; and an extensive education in one's particular vocation is absolutely necessary. To possess this requires much time and considerable use of the eyes, and in our efforts to hasten our success and excel our comrades, to reach the summit for which we have been striving, as quickly as possible, we use them inconsiderately; hence the weak eyes of ourselves and our children, to remedy which we are compelled to prescribe glasses, which correct the defects and relieve the ophthalmia and the strain. Unless the cause of the ophthalmia be removed, the disease in a short time becomes chronic, and the treatment is more or less prolonged; but if taken early, the cause searched for and removed, the recovery is rapid.

The muco-purulent variety is really an exaggerated form of the simple, the difference, as stated above, being only in degree. In fact the causes are the same, to which may be added contagion, the material having come from some other eye and having been transmitted either through carelessness in not cleansing the hands, or perhaps by means of a towel or handkerchief, this frequently being the method of inoculation.

The purulent is an exaggerated form of the muco-purulent, the dose of the poison, as it were, having been larger, the soil more susceptible and the discharge being pus.

The diphtheretic is a variety, fortunately for us, rarely seen in this country. As all diphtheretic inflammations it is characterized by the formation of a membrane, in this instance it being on the conjunctiva, and very adherent. The affection is inclined to be epidemic and is one of the utmost gravity.

The phlyctenular has the same symptoms as the muco-purulent, but is especially characterized by the appearance of small phlyctenulæ, or vesicles, on the ocular conjunctiva, and it is from these that it takes its name.

The muco-purulent and the purulent varieties, when occuring in the new-born child, are grouped together under the head of *Ophthalmia Neonatorum*, the variety that is of particular interest to you as obstetrical nurses, and to all who are connected with a Lying-in Hospital; and I have passed over the other varieties rapidly, each one of which would afford material for a whole lecture, merely mentioning a few of their chief symptoms, so that we might discuss this one at greater length. To be sure, gonorrhoeal ophthalmia is to be classed with the above group, but as this is only purulent ophthalmia from a specific cause it is hardly necessary to make another variety. The fewer the varieties the more easily understood is the disease.

As in all cases of ophthalmia, the real cause of ophthalmia neonatorum is a germ, just which particular one has not yet been fully determined, and the inoculation which takes place in one of two ways has been divided into the primary and secondary, the former taking place during, or immediately after, birth; the latter occurring in those cases in which there has been a sufficient length of time since the birth of the child to enable us to be sure that the affection is a result of post-partum inoculation.

The primary inoculation may be made in several ways. It frequently occurs in making manual examinations in face presentations; the eyelids are sometimes opened by instruments, allowing the vaginal discharge to enter; the mucous is sometimes retained on the lids after birth, sufficient care not having been taken to cleanse them thoroughly, and at a later period entering the eye causes the dreaded inflammation; and again, a very frequent cause is the direct introduction of the contagious material caused by the opening of the eyelids by the tense perineum as the head is passing through the external orifice. This may at first seem to you to be improbable, but when you consider for a moment how very tense the perineum is and how the head is elongated, causing the eyes of the child to bulge forward, it is very easy to understand how, in passing over this taut, elastic structure, stretched to its utmost capacity, the palpebral fissure may be opened and the contagion introduced. Clinically it has been determined that males are more frequently attacked than females, owing to the fact that the head is usually larger, and the children of primiparæ more frequently than those of multiparæ, on account of the tediousness of the labor and the lesser degree of perinæal elasticity and the weak expulsive pains toward the end.

The secondary inoculation is caused by failure on the part of the person receiving the new-born infant to cleanse *immediately* everything from the eyelids, in the manner which I will explain to you later; by direct contact with unclean materials, such as towels, sponges, etc., and in a manner that frequently occurs, by bathing the face and eyes with the same water with which the body has been sponged. Of course irritants, like soap, bay rum, bright lights, etc., may cause a mild type of conjunctivitis, but not the horrible ophthalmia neonatorum of which we are speaking.

Symptoms.—The symptoms, which may be divided into four stages, we are all familiar with. First, we have the period of inoculation, which usually is only a few hours; then a short period in which lymph, the exudative material that always accompanies inflammation in any part of the body, is freely secreted, and this is followed by the copious discharge of pus which is virulently contagious. There are present, of course, the characteristic pain, redness, swelling, intolerance of light, and a copious discharge. But if everything goes well the fourth stage is marked by the gradual disappearance of the secretion and a recession of the inflammation.

The pain caused by this affection is of the most excruciating character. To give you some idea how severe it is, an incident that happened several years ago, and has been recorded, is worth relating. At one time a slave ship sailing on the high seas had an outbreak of purulent ophthalmia on board. The ship was some distance from land and there were about three hundred slaves below the decks affected with the disease. No treatment was instituted at this time, but a little later some of them were allowed to come on deck to get some fresh air, and the suffering was so intense that most of those who had been allowed to come up committed suicide by jumping overboard. The great majority of those who did not meet this fate became totally blind.

Progress and Termination.—If no complication presents itself and the disease does not pass into the chronic form, it usually lasts from three to four weeks. If it terminates directly in a cure, all of the symptoms gradually diminish, and the conjunctiva returns slowly to a healthy condition. If any complication arises, however, or if the case passes into the chronic form, the affection becomes one of the greatest gravity. Small granulations begin to grow on the lids and what is known as granular conjunctivitis supervenes, a disease very difficult to eradicate, and the results may be opacities of the cornea, that part of the eye through which we see. This, of course, causes more or less impairment of the vision, and if the disease progresses it may result in a perforation of the cornea, or ultimate blindness.

Prognosis.—The prognosis of ophthalmia neonatorum is not so bad as one would at first suppose it to be. But as complications may, and do, arise at any stage of the disease, and as it is, as before stated, the cause of more blindness than any other single factor, it is almost criminal to neglect those precautions and that practice which experience has shown us reduces the percentage of cases almost to *nil*.

Treatment, Prophylactic.—The treatment of this disease is divided into two parts prophylactic and curative. In the former division come all of those means which are used to prevent the disease. First of all the laity should be instructed concerning the great danger of ophthalmia and that as soon as any inflammation of the eye of the new-born occurs, no matter how slight, it should at once be reported to a regular practitioner. This idea is put into execution in many foreign countries, so well understood is the danger of the disease, and in Sheffield the eye infirmary distributes cards which read as follows: "If a baby's eye run with matter and look red after birth, take it *at once* to a doctor. *Delay is dangerous* and one or both eyes may be destroyed if not treated *immediately*." This advice cannot be too greatly emphasized, and it would be an excellent step towards the prevention of much blindness if all, or indeed some, of our infirmaries followed the same practice. Better still if our municipal authorities would take the matter in hand and distribute printed circulars to each family, explaining the dangers of the disease and stating what should be done in case of an attack of it.

In some countries stringent regulations have been adopted as regards midwives and nurses, which are not only a protection to the infants but also to the nurses, as by following stated directions they are freed

from all blame. In New York state the following has recently been enacted: "Should any midwife or nurse having charge of an infant in this state notice that one or both eyes of such infant are inflamed or reddened at any time within two weeks after its birth, it shall be the duty of said midwife or nurse so having charge of such infant to report the fact in writing within six hours to the nearest health officer, or some legally qualifiad practitioner of the city, town or district in which the parents of the infant reside." Some such law enacted in every state would cause the number of the most hopeless and helpless or all people, the blind, to be reduced in our public institutions.

In the beginning of the second stage of labor the vagina of the patient should be thoroughly irrigated with a solution of corrosive sublimate (strength 1-2000), or a solution of some other germicide as the obstetrician may prefer, but according to my belief corrosive sublimate is the best in use at present. The hands of the physician and the nurse, as well as all the instruments employed, should be thoroughly disinfected. The fœtal eyes should be assisted to pass over the perineum without resting, for, as I have stated elsewhere, ophthalmia is frequently caused by the palpebral fissure being opened during the passage of the head over the tense perineum and the contagion thus introduced. The eyes can be made to pass over rapidly by hooking the middle finger of one hand over the perineum and drawing it downward.

As soon as the head is born, if there is time, the eyes should be wiped with small pieces of absorbent cotton or wool; and if there is not time before the birth of the body, it should be done before the cord is tied. In doing this the cotton should be loosely packed into small pledgets and the eyes very gently wiped from above downward, which will facilitate the removal of any foreign material that may have accumulated around the eyeball. As soon as this is finished two drops of a five-grain solution of nitrate of silver should be dropped into each eye, though of course this cannot be done without the order of the physician in charge of the case, and I regret to be compelled to add that many do not seem to think it is necessary to take any such precaution, notwithstanding the fact that statistics show this disease to be the greatest known cause of blindness, and that when the above prophylactic treatment is used the percentage is reduced from ten per cent. to almost *nil*.

The above is known as the Crédé method, which has been slightly modified, the original being to instill one drop of a ten-grain solution of nitrate of silver into each eye. Ascertaining that as a rule this solution was stronger than required and excited too great a degree of inflammation, it is my custom to have instilled into each eye two drops of a five-grain solution, which, though it may contain the same amount of silver, does not affect the conjunctiva so severely as does the stronger solution.

There is another method, known as the Hégar-Korhn, which consists in wiping the face and eyes immediately after birth with a solution of corrosive sublimate (strength 1-1000), and though statistics show very good results, I prefer the instillation of the astringent, believing it to be the surer and better method of prevention. In one thousand cases treated by the Crédé method not a single case of ophthalmia developed, while without it about 10 per cent. of all infants are affected with the disease. In the foundling hospitals of Paris the percentage of cases twenty years ago was from 80 per cent. to 90 per cent., while to-day it is 0.2 per cent., it being compulsory to use the Crédé prophylactic treatment.

The face of the child should never, under any circumstances, be washed with the same water with which the body has been bathed, and different sponges or pieces of flannel should be used for the face and body. The reason is understood without being given.

It is very important that you should always wash your hands thoroughly after adjusting the mother before you touch the child, and you should guard against exposing it to any draughts, bright lights, etc., or allowing any soap to get into the eyes.

Curative.—Should you be so unfortunate as to have the disease occur the child must be isolated at once, and the physician notified.

If one eye only is affected the other should be guarded by covering it with a light bandage. The physician will instruct you to cleanse the eye every hour (perhaps more or less frequently than this, depending entirely upon the severity of

the case) washing it first with warm water then with a solution of boric acid.

The best way to do this is to have some one sit in front of you and hold the child so that its head rests between your knees, with its face looking upward, your lap being protected with a piece of gum cloth or a towel. The person in front holds the child's legs under her left arm and supporting the body on her raised knees, has her right hand at liberty, with which to assist you. In this position the eyes can be irrigated and the applications made to the conjunctiva with the least possible trouble.

To reduce the inflammation cold compresses are used. I prefer to have these made out of small pieces of lint, about the size of the one I show you here, and kept on ice which cools them more thoroughly than water. They should be placed on the eye four in thickness and at first they should be changed every minute, the time between the applications being gradually lengthened. The compresses not only reduce the inflammation by processes which I will not describe to you this evening, and which are readily understood by every practitioner; but it is also claimed that they either destroy or prevent the development of the germ that causes ophthalmia, it having been proved by experiment that the said germ cannot develop at, or below, a temperature of 32° F.

The eyelids are everted at stated intervals by the physician and applications of a solution of nitrate of silver made to the mucous membrane, great care being taken to apply it to all the folds. This stops the growth of the germs and substitutes a healthy for non-healthy inflammation.

Other applications rather than nitrate of silver are frequently made, among them being insufflations of iodoform, calomel and solutions of tannin, corrosive sublimate, peroxide of hydrogen and many others too numerous to mention. In my own experience I have always found the solution of nitrate of silver to be the best, though it should not be used indiscriminately, nor applied, as many advise, with a camel's hair brush; but small pieces of cotton should be rolled on the end of a stick, as I show you here, dipped into the solution and touched to all parts of the conjunctiva, one being used for each eye, and burned immediately afterward, as should be all the pieces of cotton or lint which come in contact with the eye. But no method will be of avail unless the physician is ably supported by the nurse in the thorough and frequent cleansing of the eye; for no matter what the character of the applications may be they will not rid the eye of the micro-organisms nor prevent their multiplication unless the nurse, with whom the case is entrusted, keeps the organ cleansed of all discharge during the intervals between the applications. And when you have become tired and weary and exhausted from nursing such a case and feel disposed to neglect it, even if only for a few moments, let me beg of you to look at the subject from a humane point of view, for I know of no act of charity or benevolence more praiseworthy than that of saving the eyesight of an infant unable to help itself, and thus preserving its future usefulness for its family, for mankind at large and for its Maker; and in after years when that same infant, now grown to manhood or womanhood, is able to realize the escape it had from blindness, much of which was due to your careful nursing and your faithful attention, though you may not be aware of it, he will heap upon your head heartfelt blessings and praises, such as we all desire and can only obtain through our own efforts.

I have added to these remarks some suggestions collected from various sources which I have placed together as so many rules. In giving them to you I do so in part as a recapitulation, and perhaps am guilty of repetition; but if in so doing I am enabled to impress upon your minds some important facts relating to the disease and its prevention, so that you will in the future use them, I feel quite confident that you will assist very much to lessen the number of cases of ophthalmia neonatorum, and thereby in reducing the number of blind in our public institutions; and the purpose of my lecture will have been accomplished.

1. Before making a vaginal examination always cleanse the hands thoroughly with soap and warm water, followed by some antiseptic solution, taking care not to forget the finger-nails.

2. During labor assist the eyes to pass rapidly over the perineum.

3. Always cleanse the eyes of the infant in the manner I have explained to you *immediately* after birth.

4. Do not use the same water, for bath-

ing the face and eyes, with which the body has been bathed, and always use different sponges or pieces of flannel.

5. Never employ one towel for two persons. Let everybody have his own.

6. Be careful not to allow any soap or bay rum to enter the eyes.

7. Keep the light in the lying-in chamber very dim, or have it shaded with some dark material, green being the least trying and the most restful to the eyes.

8. Always burn *immediately* everything that has come in contact with the ophthalmic discharge.

9. Instruct the laity, whenever the opportunity presents itself, of the great danger of ocular affections of the newborn, and the necessity of consulting a physician as soon as they are discovered.

And to the members of the profession present I would add:

10. Always use the Crédé, Hégar-Korhn or some such method of cleansing and stimulating the eyes of a new-born infant.

EYE AFFECTIONS IN MALARIA.

Bagot (*Ann. d'Oculist.*, January 1892) records the following cases which occurred at Guadeloupe. The first patient was a mulatto boy of 15, who had a severe bilious remittent fever with gastro-intestinal symptoms and coma; this lasted two or three days, and immediately afterward his sight began to be affected; three months later it was found that he had a soft cataract in each eye. The second patient was a mulatto girl of 16, who also had an attack of grave malarial fever lasting three days, and immediately afterward her sight began to fail; nine months later she also was found to have a soft cataract in each eye. The third case was that of a little white girl, who had an attack of malarial fever with delirium, convulsions, and loss of consciousness lasting two days; then, for a whole day she complained of red vision, and after that her sight rapidly deteriorated until the fifth day, when she was absolutely blind. An incomplete opthalmoscopic examination at this time revealed a retinal hæmorrhage in the neighborhood of each macula. A year later she had atrophy of both discs; with the right eye there was perception of light; the left had improved more and she could see to go about, and had fairly good color perception.—*Brit. Med. Jour.*

Communications.

DIPHTHERIA.*

By E. FLETCHER INGALS, A.M., M.D.,
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Diphtheria may be defined as a specific contagious disease, characterized by pronounced constitutional symptoms and inflammation of the mucous membrane of the fauces and upper air passages, with exudation of inflammatory lymph, which rapidly becomes formed into false membrane.

It has long been recognized as one of the zymotic fevers. Many English authors consider it a constitutional disease with local manifestations, but among continental physicians and American writers there are many who regard it as a primary local affection with secondary constitutional symptoms. Personally, I am inclined to accept the former view, and can see no more reason for regarding this as a local disease than for regarding vaccina in the same light. To me, the peculiar false membrane formed in the fauces appears analagous to the peculiar vesicle developed after inoculation with vaccine virus; and the fact that there is a distinct period of incubation extending sometimes over many days before there is any development in the fauces, together with the fact that in some instances the disease runs to a fatal termination within a few hours and before there has been any appreciable local manifestations, seems to prove this position.

The disease manifests itself in the throat by hyperæmia, soon followed by the exudation of inflammatory lymph and deposit of false membrane in one or more places upon the surface, and this membrane may ultimately extend to the air passages or may be found upon wounds which may exist in other parts of the body. Upon post-mortem examination of those dead of the disease, blood clots are usually found in the heart or large arteries. The lymphatics at the angles of the jaw are enlarged and the kidneys are generally deeply congested. Various bacteriæ have been found in the mouth of those suffering from diphtheria, most of which, however, may also

*Read before the Illinois State Medical Society, at Vandalia, May, 1892.

be found in the buccal secretions from healthy individuals.

Ætiology.—The disease is undoubtedly contagious and may be transmitted from man to lower animals and vice versa, but the degree of contagiousness varies in different epidemics. The affection is generally believed to be due to a specific micro-organism, the identity of which is not as yet fully established. The researches of Pruden in 1869 pointed to a streptococcus as the probable cause of the disease. but most bacteriologists now attribute it to the Klebs-Loffler bacillus. This bacterium is a microscopic rod about the length of the tubercular bacillus, but twice its thickness It is usually more or less bent, with rounded extremities. one or both of which may be thickened. giving the club or dumb-bell appearance. It is immobile and contains no spores. These bacilli do not readily absorb the common analine stains, but may be colored by the solution of Loffler's methylene blue, the coloration often being most intense at the extremities. According to Amand Ruffer, these bacilli are found most abundantly in the superficial portions of the false membrane, and nearly all experiments go to prove that they do not often enter the lymphatics or blood vessels. Therefore, of itself, the bacillus is apparently innocuous, but it secretes a virulent toxalbumen or ptomaine easily absorbed, which, when injected into the circulation, produces constitutional symptoms similar to those of diphtheria. Numerous clinical observations and experiments have, however, demonstrated with an equal degree of certainty that pseudo-membranous inflammation is often produced independently of this bacillus, as for example, that resulting from surgical injuries to the throat, or various chemical caustics; and they have also shown that certain exudative inflammations supposed to be of microbic origin, as for example, those frequently observed in scarlet fever and measles, are not attended by the development of the Klebs-Loffler bacillus. These latter inflammations have been termed psuedo-diphtheria, and it is stated that they can only be distinguished from true diphtheria by the absence of the Klebs-Loffler bacillus, by their being followed by paralysis, and by not being attended by a peculiar form of albuminuria which occurs in true diphtheria independently of dropsy or uremic poisoning. The necessity for assuming that there are two varieties of diphtheria, seems to me to justify the statement made in the beginning, that the identity of the micro-organism, which is supposed to cause the disease is as yet uncertain.

Primary inflammation of the fauces apparently greatly favors the development of diphtheria, and its development and progress seem to be largely influenced by bad hygienic surrounding, such as impure drinking water, sewer gas, and the emanations from decaying vegetables and unclean cellars; but it is doubtful whether any of these conditions can of themselves produce the disease.

The most frequently predisposing cause of diphtheria is exposure to cold, more particularly in the spring and fall months, when the temperature of houses is liable to be kept at from 65° to 68° F. At this time adults moving about the house do not realize the necessity for fire, but the little children upon the floor are exposed to a temperature two or three degrees lower; or during the morning or evening, they are allowed to run about for sometime in their night clothing and thus contract colds, which are peculiarly prevalent at these times and which favor the development of diphtheria.

Symptomatology.—After a period of incubation varying from one to eight days, this disease is usually developed in young children with pronounced constitutional symptoms, such as headache, drowsiness, fever, thirst, and sometimes vomiting and diarrhœa. The little one usually complains of stiffness of the neck, and within a few hours of sore throat. In older children or adults, the symptoms are commonly much less pronounced, and the disease develops more gradually;the sore throat is attended by sensations of dryness and slight pain, with an inclination to frequently hawk and clear the throat. Usually within twelve to thirty-six hours a false membrane begins to form upon the tonsils and in rare instances an erythematous eruption appears upon the skin. The pulse is rapid and as the disease progresses, becomes small, feeble and intermittent. The temperature at first seldom rises above 101° or 102° F., but on the appearance of false membrane it usually falls and may even become subnormal. During the third or fourth day of the attack it is likely to rise again, indicating in favorable cases sup-

puration and oxfoliation of the false membrane; or in those which are progressing unfavorably, extension of the disease to the larynx, the lower air passages, or to the intestinal canal. A sudden fall of temperature after four or five days is a symptom of grave import. When the disease extends to the larynx the voice soon becomes affected and may be weak and hoarse even before the false membrane is deposited, but with the deposit of pseudo-membrane upon the vocal cords the voice becomes aphonic, the cough less intense, and dyspnœa develops proportionate to the amount of obstruction. In this condition the respiration becomes noisy and stertorous and the dyspnœa is constant, aggravated from time to time by spasms of the laryngeal muscles. With these paroxysms all the distressing symptoms of suffocation appear.

The deposit of false membrane frequently extends to the naso-pharynx or nares, causing obstruction and a sanious discharge, and later epistaxis. The tongue is commonly heavily coated and there is a peculiar odor of the breath, which is almost pathognomic. Anorexia, nausea, and vomiting are common, especially when the kidneys are much involved, and albuminuria is present in nearly all cases from early in the disease. The glands of the angles of the jaw are enlarged, and as as a rule, the greater the swelling, the more severe will be the attack. Inspection of the throat reveals: first, congestion; and shortly after, thin strips of yellowish-white false membrane, which rapidly extend over one or both tonsils, and in more severe cases, to the surrounding mucous membrane. With the progress of the disease, the membrane becomes grayish, brownish, or even almost black in color. It has the appearance of involving the mucous membrane and being slightly elevated above its free surface. When exfoliated, or forcibly removed, an ulcerated granular or bleeding surface will be found beneath it, though not usually co-extensive with the false membrane. When the glottis becomes obstructed, the respiratory movements become slow and labored and recession of the soft parts of the chest above the clavicles, at the ensiform appendix, and over the false ribs is noticed with each inspiratory movement. The skin is cold and pallid, and may be bathed in cold perspiration. The lips, finger nails and ears appear livid, and as the carbonic acid poisoning progresses, the patient may become extremely restless, or fall into a semi-comatose condition. With the paroxysmal spasms of the glottis, the well known symtoms of imminent suffocation are developed and death may speedily ensue.

Diagnosis.—Diphtheria is not likely to be mistaken by the experienced physician for any disease except follicular tonsillitis and simple membranous sore throat; though in some cases, it may be a difficult matter to distinguish between diphtheria and the pseudo-membranous forms of scarlatina or measles. The essential points of difference between diphtheria and follicular tonsillitis are; in follicular tonsillitis there is higher temperature, commonly two or three degrees more than that of diphtheria; there is much more pain in the throat, and difficulty of opening the mouth which is not usually present in diphtheria, the swelling of the tonsils is greater, and there appear a number of small yellow spots where secretions have collected in the follicles, instead of one or two uniform patches of false membrance spreading over a considerable part of the throat.

In simple membranous sore throat, at first there are numerous herpetic vesicles, but after two or three days these are covered with a membrane similar to that of diphtheria, though it is not so thick and more easily removed. Commonly also, there are several patches of this false membrane, and herpes labialis is apt to occur at the same time. The pain is simple membranous or as it is sometimes known, herpetic sore-throat, is usually very much more intense than in diphtheria.

There is usually no difficulty in distinguishing between diphtheria and scarlatina or measles, but sometimes in either of these affections the deposit of false membrane in the fauces may cause an appearance very like that of diphtheria, There is a question whether in such cases there are the two diseases combined, or whether the pseudo-membrane, as claimed by bacteriologists, is entirely different in its origin from true diphtheretic membrane.

Prognosis.—The prognosis of diphtheria is always grave and we can never assure the friends that the patient is out of danger until he has been well for three or four weeks, because of the serious sequelæ which sometimes follow. I have known cases to terminate fatally within twelve

hours after the beginning of the attack, but in the majority of serious cases a fatal termination does not occur before the fourth or fifth day, and in a considerable number the struggle for life may continue five or six weeks. In some epidemics of the disease a large percentage of patients recover; but in others twenty-five or thirty, or even a large per cent. prove fatal. The deposit of false membrane in the nose, or naso-pharynx, or intestines; the occurence of extreme pain in the ears and throat, of purpuric spots upon the skin, or of epistaxis or other hæmorrhages, and the presence of persistent anorexia, vomiting, diarrhœa or suppression of urine, are all indications of grave import. Patients may die slowly from asthenia or more quickly by suffocation, or they may be carried off by heart failure or convulsions. Not infrequently paralytic symptoms follow the attack about the third week, but except in cases where the respiration or circulatory centers are involved, recovery usually occurs, though it may be delayed for weeks or even months, and sometimes the paralysis is only partially recovered from, more or less loss of muscular mobility remaining permanent.

Treatment.—There are few diseases in which the methods of treatment are more numerous; a fact which may be explained by the great inutility of the majority of means adopted. So much depends upon the condition of the patient when attacked, upon his hygienic surroundings and the variety and nature of the particular epidemic, that physicians are necessarily led astray in estimating the effect of remedies employed. During the early portion of a severe epidemic a very large percentage of patients may die whatever methods are used in the treatment; but later on the cases become less and less severe and the fatality greatly diminishes, regardless of the treatment employed. However, the remedies which are in use during the latter part of the epidemic are liable to receive all the credit.

Whenever diphtheria appears in a household, the greatest care should be exercised to isolate the patient, and all other children should be removed if practicable. The rooms occupied by the patient should be kept carefully closed, the doors covered with sheets constantly moistened by antiseptics, and the patient and nurse should have no intercourse whatever with other members of the household. The sick rooms should be kept warm and thoroughly ventilated, and finally when the attack subsides, the utensils and clothing used in the sick room should be disinfected or destroyed, and the room thoroughly fumigated and aired before it is again used; even then it is well to prevent children from occupying the room for several weeks afterwards.

In the beginning of the attack, ice taken freely into the mouth tends to relieve thirst and reduce congestion and apparently markedly to limit the progress of the disease. Of even more importance has seemed to me the application externally of ice bags or the ice water coil of metallic or rubber pipe applied to the throat. When ice bags are used, they should be narrow and long and should be about half filled with pieces of ice about the size of filberts; the bag may then be folded in a handkerchief and tied so that it will extend up to the ears on both sides. The ice will need to be changed about every hour. Occasionally patients complain of pain when cold is employed and in these, very hot applications will be found to answer a better purpose, but whether hot or cold be used, it must be continuous; otherwise more harm than good will result.

As soon as the membrane begins to separate, hot applications appear to be more useful than cold. The disease usually causes dangerous prostration. Therefore the patient should be well nourished from the beginning. Liquid diet in the form of beef tea, broth, or better yet, milk, should be given at regular intervals and in large quantities; about half a pint or its equivalent being used as often as every third hour. Alcoholic stimulants are recommended early by many practitioners, but to me they seem unnecessary and undesirable until the stage of depression supervenes. Acting on the principle that bacteria cannot live in acid solutions, some physicians recommend the free use of acidulated drinks or gargles, and this possibly explains the reputation recently attained among the laity, by pineapple juice, as a cure for diphtheria. Many substances have been used with the hope of removing false membrane; the simplest of these is steam, which may be impregnated with the time-honored lime water and applied by the croup tent or any suitable atomizer, but it is extremely doubtful whether lime

in any form is ever applied in sufficient quantity to appreciably affect the pseudo-membrane.

Lactic acid is one of the most powerful solvents for pseudo-membrane. It has been highly recommended in about 15 per cent. solution to be frequently employed as a gargle or spray; and in full strength to be carefully applied by the physician twice daily to the false membrane. Tripsin, resorcin and papain have all been used for their solvent effects upon the membrane, but they seem to have little if any influence upon the progress of the disease. Tannic acid and alum are used to astringe the false membrane, and insufflations of sulphur have become extremely popular with the laity, but none of these seem to have much effect upon the disease. Solutions of mercury-bichloride one to one thousand or weaker; of carbolic acid, one to three per cent.; of potassium permanganate, one per cent.; liquor sodæ chlorinatæ, five per cent.; of chloral, about thirty per cent.; or of sulphurous acid, from five to ten per cent., have all been highly recommended, from time to time, as gargles or sprays to destroy the poisonous germs in the throat. Peroxide of hydrogen is also used for the same purpose, either diluted with an equal part of water, or in full strength as obtained from the pharmacist. Tincture of myrrh, strong alcohol, and tincture of the chloride of iron have also been recommended, and occasionally tincture of iodine or a strong solution of nitrate of silver are used. I believe that strong applications often do more harm than good, and any remedy which causes the patient pain for more than five minutes is likely to be injurious. Tincture of iron has seemed to me one of the best remedies for local use, as it has also appeared for internal administration. Recently I have adopted as a local application, either by means of spray or gargle, a saturated solution of boric acid in cinnamon water. The researches of Roux and Yersin in 1889 demonstrated that the toxicity of cultures of the diphtheritic bacillus are greatly diminished by the addition of carbolic acid, borax or boric acid, and the experiments of Dr. G. V. Black, reported in the *Dental Review* for February and March, 1889, have shown that the oil of cinnamon, 1 to 2000, is a most efficient germicide; therefore, a combination of these two appears especially suited to the destruction of the diphtheritic bacillus. This application is neither unpleasant, painful nor dangerous, and from my clinical observation, it appears very effective. My common practice in diphtheria is to give tincture of iron in large doses, about one minim for each year of the child's age, combined with an equal quantity of glycerine and enough syrup of tolu to make one drachm. This dose is administered every hour in serious cases, or once in two hours where the symptoms are less severe. The patient is first given three or four swallows of water, so that the medicine will not prove irritating to the stomach, then the medicine is administered in as concentrated a form as can be taken without causing pain; the patient is directed to hold it in the throat as long as possible, thus obtaining the effect of a gargle, and then it is swallowed. Usually as much as ten minims to the drachm will not cause pain in the early stages of the disease, but later on it may be necessary to dilute the dose with water. The gargle or spray should also be used every hour. Thus, one or the other would be administered every half hour except during the night, when it is often necessary to allow the patient to sleep. However, when the disease is progressing it is sometimes unsafe to allow the patient to go more than half an hour without receiving either the gargle or the solution of iron. But I would strongly deprecate awakening the patient more often than is necessary for this purpose, and as soon as the membrane ceases to spread, I would allow the child to sleep one or two hours rather than disturb it to give the medicine. Quinine in moderately large doses may also be given judiciously, and as the stage of depression comes on, alcoholics should be used freely, it making little difference in the progress of the disease whether they be in the form of wine, whiskey or brandy. Children will often take much more readily than any of these a mixture of equal parts of alcohol and syrup of tolu which is practically of the same strength as good whiskey. When the heart fails, no remedy is of so much value as some of the preparations of nux vomica. The tincture of nux vomica although liable to variation in strength has seemed to me to act more favorably than strychnine. Which ever preparation is adopted it must usually be given in large and frequently repeated

doses; to a child of five years of age I have given one or two minims of tincture of nux vomica, which equal two to four drops, every hour for many days, with the greatest benefit. I should not hesitate as long as the heart continued weak to give half a minim(that is one drop) every hour until the constitutional effects as indicated by twitching of the tendons, were developed; the doses should then be slightly diminished, or the intervals between them prolonged. Within the past few years the bichloride, and other preparations of mercury have been largely used in the treatment of diphtheria in doses often much larger than could safely be administered to adults. I have myself used freely the mild chloride of mercury (calomel), with most happy results in diphtheritic laryngitis, but I have not favored large doses of the other preparation believing that a system already struggling against the virulent action of the toxalbumins is poorly fitted to withstand poisonous doses of bichloride of mercury and its congeners. The mild chloride of mercury has been highly recommended for diphtheria and I have no doubt that it is beneficial, especially as a cathartic. I have found it most efficacious in instances of diphtheritic laryngitis, and have never known it to do harm even when given in very large doses.

Among other remedies which have received the sanction of good authority for the curing of this disease, are cubebs, copaiba, potassium chlorate, the sulpho-carbolates and sulphites of sodium and potassium, and the salicylates and the benzoates of potassium, sodium and ammonium. Indeed, there are few remedies of any potency in any disease which have not been tried for this affection and which have not, for a time at least, received more than merited praise.

When the disease extends to the larynx, non-depressing emetics are sometimes useful to dislodge the false membrane and the mild chloride of mercury in large and frequently repeated doses has seemed to me most beneficial in preventing its deposit. I have given calomel in such cases in doses equivalent to half a grain for each year of the child's age, and repeated every one or two hours according to the severity of the case, until its effects upon the bowels were noticeable. It is surprising how much of the remedy may be taken in such cases before its characteristic effect upon the stools occur. I have seen a child two or three years of age take 30 or 40 grains before the bowels moved. As soon as the effects of the remedy are noticed upon the stools, the dose should be diminished in size and frequency and as soon as the dyspnœa is relieved, the remedy should be withdrawn. Unfortunately, whatever remedies are employed, the false membrane will frequently extend to the glottis, as indicated by difficulty of breathing, blueness of lips and finger nails, and recession of the soft portions of the chest walls during inspiration, when these symptoms occur, no time should be lost in adopting operative measures, although a certain number of cases may be cured by mercurials or a small precentage might recover from the unaided efforts of nature.

It is not safe to wait for nature or the slow effect of medicine in these cases, for statistics have shown that about 95 per cent. will prove fatal when the larynx has become involved, unless operative measures are adopted and even with these only 25 or 30 per cent. are saved. One of two operations may be adopted, the one to be preferred depending somewhat upon the age of the child and its surroundings. Other things being equal, in a child under five years of age, I decidedly prefer intubation by O'Dwyer's method, though in older children it is not quite as satisfactory as tracheotomy. Even in quite large children intubation has been found useful, particularly when the graver operation will not be permitted. I would recommend that it be tried first in all cases, because of the ease and rapidity with which it can be performed, the avoidance of a wound liable to a secondary infection and the ready consent of parents, and finally, because it is no bar to the subsequent performance of tracheotomy, should this severe operation appear necessary.

I hope, gentlemen, that you will try intubation in these cases, and I believe that none of you will fail in successfully introducing the tubes. The confidence gained by two or three intubations will cause the physician to recommend the operation earlier, and thus protracted dyspnœa and the consequent pulmonary congestion and œdema will be prevented and many lives will be saved that would be lost if the operation were delayed until suffocation became imminent. There is only one accident which is likely to occur in the

performance of intubation, namely, the crowding downward of loose membrane before the tube; this in a few instances has caused speedy death. To relieve the difficulty all that is necessary is to at once withdraw the tube, when the loosened membrane will be drawn out with it or will be coughed out immediately afterwards; but in some instances this happy result is not obtained, and, therefore, it is well for a physician always to have a tracheotomy set at hand when about to perform intubation, so that the trachea may be opened at once if necessary. I have never found it necessary to resort to tracheotomy at such times, but have long felt it best to be prepared for any emergency that might arise. It is best before doing intubation to explain to the friends that there is a bare possibility that the child may die before it is completed, because of this accident. When tracheotomy for any reason becomes desirable, it should be done as soon as practicable after marked inspiratory recession of the chest walls indicates serious obstruction of the glottis.

36 Washington street.

PATHOLOGICAL ANATOMY OF EXOPHTHALMIC GOITRE.

Mendel (*Deutsche medicinische Wochenschrift,* February 4, 1892) after calling attention to the poverty of medical literature in cases of exophthalmic goitre with definite lesions, reports a case observed by himself, over a term of two years, which was a typical case of this disease. The patient died of cardiac paralysis. At the post-mortem there were no gross lesions observed, either in the brain, spinal cord, sympathetic or vagus. Careful microscopic examinations were made, however, of all these parts. The cortical substance of the brain, the different ganglia, the cerebellum and the vagus were entirely normal. Two changes were, however, noticed; first, a difference between the two restiform bodies; in a series of 1,210 sections of the medulla the left restiform body was seen to be atrophic; second, there was evident atrophy of some of the solitary bundles in the right restiform body. The author calls attention to numerous experiments upon lower animals, where symptoms of exophthalmic goitre have been caused by a destruction of restiform bodies.—*Univ. Med. Mag.*

FRACTURE OF THE LOWER JAW.

By A. O. STIMPSON, M. D.,
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On 1st March, 1888, I was called to go and see Henry J. Cleveland of our town who was reported as seriously injured about the face. On examining the case I found a contused bruise of the left side of the lower jaw, with a double fracture of lower jaw, so that the incisor and canine teeth were turned out upon the chin. The accident was caused by the man's face being compressed and bruised from the sliding of a load of hay in a rack from the wagon toward the hay mow in the barn while attempting to unload it.

The lines of fracture are indicated by the

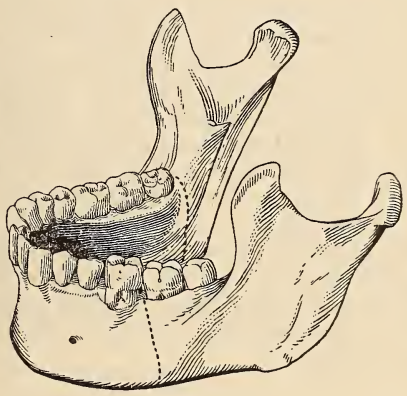

Fig. 1.

dotted lines (Fig. 1). After washing and bathing the face and jaw with an infusion of arnica-blows and cider vinegar (used warm), I applied a splint as follows: I took a piece of sole leather of the right length to extend around the lower jaw and split the splint like this (Fig. 2). I then sewed a bandage of the

Fig. 2.

appropriate length to each tail of my improvised splint, and after soaking the leather in warm water so as to mould it to the shape of the jaw, after padding it with

absorbent cotton, I fastened the lower segment of the splint over the vertex of the head and the upper one on the back of the neck in this way (Fig. 3). I extracted one of the in-

Fig. 3.

cisor teeth on left side to allow of nourishment being introduced by means of a rubber tube, and in twelve days' time the man was able to take nourishment in the ordinary way, but was not allowed to masticate any food until the expiration of thirty-two days. The patient made a good recovery, and to-day you can scarcely trace out the line of fracture, either in front or at the side of the jaw.

The point of interest in this case is that no sutures of wire or silk were used and still the bones were kept in close apposition by the simple confinement by the sole-leather splint.

HYDRAMNIOS AND PRESENTATION OF HEAD OF ANENCEPHALOUS MONSTER DIAGNOSED BEFORE BIRTH.

Pinzani (*Riv. di Obstet. e Gin.*, 1891, No. 24) attended a patient in whom, four days before her confinement, he diagnosed the presence of an anencephalous fœtus in an instructive manner. It was evident that the long axis of the fœtal body was vertical, and careful external examination indicated head presentation. On vaginal exploration, an irregular surface with numerous bony prominences was found presenting. Pressure on this surface set up convulsions in the fœtus; this phenomenon was observed on several occasions. Hence, face presentation was out of the question, and an anencephalous monster evidently present. The patient was delivered of a female anencephalous fœtus, which showed signs of life for a short time. Childbed was perfectly normal.—*Brit. Med. Jour.*

CLINICAL NOTES ON A CASE OF HYSTERIA IN A BOY EIGHT YEARS OF AGE.*

By SAMUEL AYRES, M. D.
PITTSBURG, PA.

The rather infrequent occurence, or perhaps recognition, of hysteria in young children, induces me to report the following interesting case:

William T., *æt* eight years, had good family history and previously good health. In the early part of December, 1891, while attending school, he became involved in a quarrel with four boys, who pitched upon and struck him about the face and head, there being left, however, no visible bruises or marks of injury. Immediately after returning home that evening he complained of severe headache, not specially localized. This continued without abatement for about two weeks, when the family physician, Dr. Wallace, of Ingram, was consulted. After treating the patient a few weeks there was still no improvement in the headaches, but otherwise the boy's general condition was not much impaired. He had not been allowed to attend school since the accident, but played about the house, had a fair appetite, bowels were regular, and there was no abnormal variation in temperature or pulse. But he was pale, and complained of almost constant headache. On the advice of Dr. Wallace, his eyes were during this time examined by Dr. Geo. W. Allyn, who found a low degree of astigmatism and prescribed glasses.

On the morning of January 17th, last, the boy had a fainting spell before breakfast and became very pale, weak and languid, complaining severely of the usual headache. At that date Dr. Wallace referred the patient to me, and the boy was brought to my office on the 18th of last January. A careful examination was made. Mentally the boy seemed clear, and gave prompt answers to all questions. His face was rather pale, the pupils widely dilated, contracting slightly to bright light. The tongue was extruded straight, and not much coated. The pulse about 80°, temperature normal. No abnormal

*Read before the Allegheny County Medical Society, May 10, 1892.

motor or sensory phenomena were noted. The optic discs were normal. The urine contained neither albumin nor sugar.

The headache, of which he only complained, was referred to the vertex and forehead. The nature of the case was not entirely clear to me. The cause was obviously connected with the injury to the head, as he had been perfectly well up to that time. I therefore inclined to the opinion that the case was one of simple neuralgia, or else a slight injury to the cerebral membrane, perhaps a localized patch of congestion in the frontal region.

On this theory I prescribed small doses of sodium iodide and sodium bromide; also one grain of ergotin three times daily, and blistered each mastoid process, In three or four days the boy was brought back to my office without any improvement in the headache. The same treatment was continued excepting that 1/8 grain of protiodide of mercury was substituted for the ergotin. A mild galvanic current was passed for a few minutes from forehead to occiput. The parents were directed to discontinue this treatment in two days if he were not better, and to give tablets containing three grains of antipyrin every three hours. The day following this I was summoned in great haste by the father to meet Dr. Wallace, the former stating that he thought his son was dying. It seems that the lad complained of being sleepy and tired, and sitting on a rocking chair apparently went to sleep, but at once exhibited some general convulsive movements, and became wildly incoherent. When Dr. Wallace and I arrived, the boy was in bed and appeared rather bright and talked rationally. His pulse was about 90°, temperature normal. He complained, as usual, of the headache. When questioned as to the spell he had just had, he seemed to remember nothing about it. Very soon he was seized with one of these paroxysms, consisting of symmetrical clonic spasms of the forearms and hands, the same spasmodic movements passing to the lower extremities, the whole attack lasting scarcely a minute. There was apparently no loss of consciousness; no frothing of mouth; no change in the color or expression of face. At another time there would be a rapid turning of the head from side to side, or contortions of the entire body, or opisthotonus, accompanied by profane utterances, or other incoherent outbursts, terrifying and shocking his parents. We withdrew the iodide, increased the bromide to 10 grains every three hours, and gave a little tr. of opium and aconite. Broths and other concentrated nourishment were given and accepted at frequent intervals. At our consultation the following day the boy was rather worse. The paroxysms, above described, had been more severe and frequent. The breathing at times had been irregular and jerky, diplopia had been observed. The head was occasionally retracted and bored into the pillow. The parents stated that he had been very "flighty"; that at times his eyes were glassy and upturned and that they thought in one of these spells he would die. He had taken nourishment and slept fairly well, though during sleep there was much muscular twitching and catching respiration. When we entered the room the boy greeted us, and smiled and talked intelligently. We soon got him out of bed and tried to have him walk. His gait was very unsteady and he settled well back on his heels, inclining to fall backwards. But with assistance he walked some.

Replacing him in bed and retiring from the room we slightly opened the door. In a few moments he had one of the paroxysms above described. Gliding in swiftly I pressed firmly on the supraorbital nerve. The boy immediately ceased his contortions, cried with pain, and said I had hurt him. We desired no further proof of the nature of the case, and the subsequent history confirmed the diagnosis. On appropriate treatment, of tonics, outdoor exercise, and the ignoring of his headache by the family, the boy gradually recovered, only once after having hysterical attack, which was promptly arrested by the same means.

The fact that the patient was a boy, that he was so young, and that the headaches seemed to be of traumatic origin, quite misled us for a short time, as to the real nature of the trouble.

I will not detain the society with any remarks on hysterical affections in young children. They do, of course, occur in children of either sex, much younger than this one, but are, I believe, comparatively rare in our country. In France, nursery hysteria is by no means uncommon.

THE TREATMENT OF CYSTS AND ABSCESSES BY PAPOID AND PEROXIDE OF HYDROGEN.

By O. A. HYDE, M. D.,
NEW YORK CITY.

The first case was one of sebaceous cyst at the calf of the leg, the cyst having existed for at least ten years, and until recently, given but little trouble. When I opened the sac, it was inflamed, partly broken down and about to open at the site of my incision. Its cavity contained about 16 to 20 grams of decomposed sebum and pus. I made but a small incision that the fluids might be better retained. The solution employed was as follows, viz:

℞ Papoid..... 15 to 20 grams.
Sodii Bicarb..... 5 to 10 grams.
Aquæ..... 100 c. c.

This injection was allowed to remain from one to eight hours, then pressed out of sac, and a strong solution of peroxide of hydrogen introduced to thoroughly clean the cavity. This was repeated once or twice daily. The patient was irregular in treatment of cyst, otherwise the result would have been obtained earlier. A few weeks of this treatment entirely removed the cyst wall, and satisfactorily cured the case.

The second case was one of perineal abscess, that owing to the carelessness of the patient had existed for several months, during which period it had been thoroughly injected daily with peroxide of hydrogen solution. The patient was unwilling to remain away from his business, and thus have the necessary rest for cure, and also was troubled with uric acid deposits and calculi in bladder. The abscess improved under above treatment, but would break down occasionally and discharge pus. Several times the urethral floor was perforated by the pus, and urine passed freely through the sinus. I injected a 15 per cent. solution of papoid, of the formula above given, allowing it to remain in the cavity about 10 to 15 minutes. The patient described the sensation at the time, as though many mosquitoes were stinging the sac walls. I cleansed the cavity with peroxide hydrogen solution as before. In a day or so, the abscess closed and remained so for ten days; it then had a slight discharge of pus, but an injection of peroxide hydrogen was followed by permanent closure of the sinus. This treatment was given three or four months ago.

The prompt arrest of this abscess from a single injection of an alkaline 15 per cent. solution of papoid, greatly surprised me. The cure cannot be attributed to peroxide or hydrogen, as this had been used for months with favorable, but not curative results; employed, after the papoid, it simply, or mainly oxidised the debris or digested pyogenic membrane, facilitating its removal.

Had I employed the papoid and been aided by rest to my patient, I am confident that I could have cured the case, probably several months earlier.

127 *E. Ninety-third St.*

THE TREATMENT OF PERITYPHLITIS.

Dr. Vollert describes (*Deutsch. Med. Wochenschr.*, No. 33, 1891) the treatment pursued in this affection at the clinic of Nothnagle. In recent cases, leeches (about ten) are placed over the seat of inflammation. The leeches are supplemented by the ice-bladder and cold cloths. If the cold is inconvenient to the patient, then poultices are employed. If the resorption by the exudation is delayed, inunctions of green soap or iodoformized collodion, with tincture of iodine, equal parts, is applied to the part. The diet is, of course, regulated. Pain is controlled by morphine. After subsidence of the inflammation, during the period of convalescence, rectal injections are given, in case no spontaneous alvine evacuation occurs. The enemata may be aided by Carlsbad salts. In inveterate cases of peri- and paratyphlitis, where the exudation is not resorbed, massage and warm poultices are especially serviceable. An operation in perityphlitis is only indicated when an abscess is positively shown to exist. The cases most favorable for an operation are those where the exudation is circumscribed and encapsuled. It has been frequently observed, under proper treatment, that even large accumulations of pus have been resorbed. When peritonitis occurs as a complication, the prognosis is always more grave. When the vermiform process is perforated, it is best resected, unless it is attached to the neighboring intestines.—*Wiener Med. Presse.*

THE ARTIFICIAL FEEDING OF INFANTS.*

By CHARLES S. SHAW, M. D.,
PITTSBURG, PA.

The proportion of artificially fed infants to those suckled by the mother, or wet nurse, in large cities, is variously estimated to be from ten to twenty per cent. As these estimates are based solely upon individual observation they necessarily differ widely because of the various conditions of environment that determine the method of feeding. Broadly, it may be said, that in the higher social scale the infant is more likely to be deprived of its natural nourishment. My own experience would place the proportion of artificially fed infants at not less than ten per cent. This refers only to infants who are fed exclusively in this manner; the proportion would be much larger if it included those in whom, because of a deficiency in the quality or quantity of the mother's milk, some artificial adjuvant is necessary. The proper feeding of infants artificially is a subject that may well engage the attention of medical men, for it may be safely asserted that the number of children properly so fed is, unhappily, very small. It is needless to refer to the disasters that attend the bottle-fed baby; they are too familiar to demand anything more than a passing notice. The statement of Holt may be quoted, however, as a general index of infant mortality under these conditions. Of 1,943 cases of fatal diarrhœal disease, 97 per cent. were artificially fed.

With the maternal method of feeding constantly before us as a model, it would seem that a sufficient substitute ought not to be difficult to obtain, but in spite of the apparent simplicity of the problem it has not yet been entirely solved, and until very recently hardly any progress whatever has been made towards its solution. There is, however, a vast improvement in the artificial feeding of infants in the last two years; and the improvement is due, like most recent advances in medicine, to a recognition of the all-pervading influence of bacterial life. The investigations of the bacteriologist, which have so enlarged the power and scope of surgery, which promise so much in the treatment of disease, have also had a most salutary effect upon the subject under consideration.

In dealing with this question of artificial feeding, it is evident that we should endeavor to approximate the maternal and natural method as closely as possible, in the composition of the food, and the quantity, the frequency of feeding and the method of administration.

Practically, we have but one substitute for the mother's milk, that is the milk of the cow. Goat's milk, asses' milk and mare's milk have been suggested and recommended, but it is evident that their usefulness is very restricted. The legion of prepared foods in the market may be dismissed without notice. They are all defective in composition and at most can be used only as adjuvants to a diet whose basis must be milk. The milk at the command of the consumer in a large city is that which we must use. Of course it goes without saying, that the fresher and purer the milk the better, but with the modern method of treatment, the milk in the hands of the dealer is sufficient, so the care and the expense often futile too, with which the anxious parent sought out peculiar excellencies in the milk for the child are now largely removed. The endeavor is to make a food of this milk that will resemble the mother's milk as closely as possible.

The average of the analyses of human milk, taken from Rotch's article in the Cyclopædia of Diseases of Children is: water, 87-88 parts; solids, 12-13 parts. These solids are: fat, 4 parts; albuminoids, 1 part; milk sugar, 7 parts; ash, .2 parts. Cow's milk shows by the same authority, practically the same proportion of water and solids, the solids are: fat, 4 parts; albuminoids, 4 parts; milk sugar, 4 parts; ash, .7 parts. Here we see the same amount of fat in each, but the cow's milk contains four times as much albuminoids, a little more than one-half as much milk sugar and more than three times as much ash. Evidently if we dilute the cow's milk with water till the albuminoids are the same in each, we will have only one-fourth as much fat, a little more than half as much sugar, while the ash will be nearly the same. Then by the addition of fat and milk sugar in the proper quantity to the diluted cow's milk, we make a mixture very closely resembling the mother's

* Read before the Allegheny County Medical Society, May 10, 1892.

milk. But the cow's milk, as we find it in the market is acid, while woman's milk is invariably alkaline. To remedy this we add lime water to the mixture, and the result is a compound that seems to be almost identical, chemically, with human milk. For the preparation of 8 oz. of the mixture, as given by Rotch, take water, 3 oz.; cream, 2 oz.; milk, 1 oz.; lime water, one-fourth strength, 2 oz.; milk sugar, 3⅜ drams. One of the essential differences between cow's milk and woman's milk, that is removed by this dilution, is the character of the curd. Undiluted cow's milk coagulates in hard and large curds, while the curd in woman's milk is very light and fine. The dilution of cow's milk, with four parts of water, reduces the curd to about the same as that of woman's milk. The mixture resembles closely the old Meigs' mixture that was so popular in Philadelphia a generation ago. In composition, appearance, taste and reaction, it is almost a perfect imitation of human milk, but there is still a most important difference—the mother's milk is sterile; the mixture is not. It is the sterilization of the artificial food that is the great advance in modern infant feeding. The experience of the nursery long ago taught that boiling the milk made it "keep better," and rendered it more acceptable to the infant's stomach. Reason would suggest that raw milk is the most natural, and therefore the better food for the child; and Raudnitz has demonstrated that boiling the milk lessens its nutritive value, but in spite of these objections the boiled milk was preferred. The reason for this preference is that boiled milk is sterilized, and sterilization is of more importance than comparative nutritive value or digestibility. The reason for the well-merited popularity of condensed milk may be found in the same fact. Condensed milk, though a very imperfect food, chemically, is more or less sterile, and this compensates for all its short-comings. Now, if we sterilize the mixture above described, we have counterfeited the mother's milk in every essential particular, and have, if not the ideal food, at least a very satisfactory one, and the best at present attainable, This is done by heat. The most convenient way is by subjecting the mixture to a steam bath for 20 or 30 minutes, though any other method of thorough heating will answer. The only requisite is that the mixture shall be heated to a temperature of at least 212°, and kept at that heat for 20 minutes or more. The vessel containing the mixture may be placed in a water bath and heated, or a steam sterilizer may be improvised with the kitchen utensils known as a collander and a pot for boiling water. It is, however, better both for efficiency and convenience to use some apparatus designed for the purpose. Various forms of sterilizers are on the market, and they may be equally good, but my experience has been limited to that known as the Arnold Steam Sterilizer, with which you may be familiar. It consists of an evaporating pan surmounted by a steam chamber, which holds a rack containing a number of 7-oz. graduated bottles. It is made of tin and is inexpensive. In using this apparatus the child's food for the day is prepared when the milk arrives in the morning. When making the mixture the lime water should not be added until after heating. Otherwise the food will have a straw yellow color, and the taste will not be as pleasant, though the nutritive value and wholesomeness are not impaired. Sufficient of the mixture, without the lime-water, for each nursing is put into each bottle, and the whole sterilized by 30 minutes' steaming. The proper quantity of lime-water is then added to each bottle, the neck of each is stopped by a plug of clean cotton, and as required they are used. In this apparatus the sterilizing bottles are used as nursing bottles, and very excellent ones they make. The plug of cotton is removed, the rubber nipple adjusted, and the mixture heated to about 100° in warm water. Any food remaining in the bottle after the infant has satisfied its appetite, is thrown out. This use of the bottle is not only a great convenience, but it also removes all necessity for disturbing or handling the mixture after sterilizing, and renders subsequent contamination of the food improbable.

The quantity of this sterilized mixture to be given to the child at each feeding depends, of course, on the size and vigor of the infant, and its digestive capacity. Biedert's law is two-and-a-half ounces of the food to every pound weight of the child in 24 hours. During the first three months the babe may be fed every two hours during the night. This would make ten feedings in the twenty-four hours, and, allowing one-and-a-half or two ounces at each

feeding, would amount to a pint or a little more of the mixture. There is always more likelihood of over-feeding than of under feeding. As the child grows the quantity of the food should be increased and the intervals between the feeding lengthened. At six months the child may be taking four or four-and-a-half ounces of food at each feeding, and a total of two-and-a-half pints in the 24 hours.

If the sterilized bottle is not used in feeding the child, the best substitute is the ordinary nursing bottle, or a common prescription vial of four or six-ounce capacity. This bottle is surmounted by the common rubber nipple or teat. As found in the shops the perforations in this rubber nipple are frequently too minute, and should be enlarged. In the selection of the nipple cares hould be taken that it is neither too hard and unyielding, a common fault with those made of white rubber, nor so soft and flaccid that it will collapse, as some of the black rubber and red rubber ones do. The worst apparatus is probably that arrangement with the long rubber tube, so popular with lazy and ignorant nurses, and to be had at all drug stores. It is a device worthy of the invention of a Herod, and its sale should be prohibited.

NERVOUS AND MENTAL DISTURBANCES FOLLOWING THE EXTIRPATION OF BOTH TESTICLES.

M. Weiss (*Wein. Med. Press.*, 1890) reports the case of a man fifty-four years of age, in whom a series of grave nervous symptoms occurred, shortly after the removal of both testicles for tubercular disease. This condition manifested itself by great mental and physical restlessness, agitation, palpitation of the heart, gastric crises, profuse perspiration, melancholia, syncope, etc. The author noted the similarity of these symptoms to those observed in women at the menopause, or after the removal of the ovaries.

He ascribes these disturbances to the absence of the normal secretions from these glands, which from the experiments of Brown-Sequard seem to have a marked tonic effect upon the nerves. The removal of this stimulant, he believes, results in a general nervous depression, as in cases where other habitual stimulants are suddenly suspended.

Society Reports.

ALLEGHENY COUNTY MEDICAL SOCIETY.

Scientific Meeting, May 10th, 1892.

J. C. Lange, M. D., President, in the Chair.

CLINICAL NOTES ON A CASE OF HYSTERIA IN A BOY EIGHT YEARS OF AGE. By Dr. Samuel Ayres. (See page 18.)

Dr. Charles S. Shaw read a paper on Artificial Feeding of Infants. (See page 21)

DISCUSSION.

Dr. Green: I am satisfied that every physician who has been so unfortunate as to engage in the treatment of children brought up on these diets, has a task before him. I have in numerous cases resorted to almost any or every method that I could find, preparing different foods in different manners, and am sorry to announce in many instances utterly failed in the end, but I have been successful very often in the feeding of a child on artificial diet, and I feel free to state while I am not wedded to any particular food or any particular manner of preparing food, I believe the condensed milk is very good and possibly proves successful in a larger number of cases than any other single milk diet that is artificially applied or given. I agree with Dr. Davis; I think it is well to examine the cow as well as the baby and food. I think, without looking to all these factors in the case, we many times fail, and if we fail to find a sufficient quality of food, and if we fail to find proper digestion of the food given to the child, by examining the different points or factors in the case, we often can arrive at the preparation of a particular food for a particular case. I think Dr. Kœnig's remarks were well placed. I feel that many times it is not the food; it is the stomach.

Dr. Lange. There seems to be a little diversity in the argument. The title of Dr. Shaw's paper was infant feeding, and although that is very hard to consider without considering some of the diseases, still it seems the discussion of diseases of infancy has got the upper hand. No one will claim that any food will prevent cholera infantum, "summer complaint:" that

if we had an ideal food that summer complaint would be banished from the land. It would probably be banished no more than other diseases will be, even under the best sanitary arrangements. It seems to me every doctor ought to have a standard as to infant's food. Now it has been said that it has often happened that infants would be fed from one cow and then another cow and a third cow, nursed by one wet nurse, and two, and three and to the number of five, but it must be remembered the period at which the fifth nurse nursed the child is not the same as the first, second or third did. The conditions of the stomach play the most important part and not the nurse. It has happened to me in my time, to have three infants who, we became convinced, could take absolutely nothing into the stomach: they probably could not have taken the ideal food if we had had it. These three infants were deprived of all food and were only anointed, one for a period of three weeks, with almond oil, oil of sweet almond, and the infants received nothing into the stomach but a little water and recovered and grew strong under that treatment, afterwards taking the milk well, which formerly disagreed. Now, the point I desire to make is, food, even if it is the best, is not always acceptable to infants. Then, as I understand it, shipping the milk, skaking the milk, driving the milk in the sun and canning the milk, can do it no harm if it is sterilized. It is not the heat that spoils it, but the bacteria that are in it. So, if it it were sterilized, it might be shipped around the world and come back as good as it was. That is a strong argument for sterilization, but we should have a standard of the best infant's food, irrespective of differences that may exist between mothers and cows. The same differences generally exist in every piece of meat that we all eat. Further, it has been said that it would be beneficial to add a digestive ferment, as for instance, pepsin. Now, pepsin is getting to be old, and I think the majority of you will agree with me if you studied it as close as I have, that it is a substance which is entirely useless. I do not believe a physician ever got any result from it, unless he had used along with it the important factor, hydrochloric acid, and I can promise every gentleman, in cases of gastric disturbances, if he will use pepsin without hydrochloric acid, and then use the acid without pepsin, the last will bear much better fruit than the first.

Dr. Shaw: Mr. Chairman, my conception of this subject was an average one, not the proper artificial food for any particular infant, that demands any particular care, not a food for an infant of abnormally weak digestive ability, but for the average healthy infant, an average food, as has been suggested, a sort of standard. Now the statement has been made that there is a great change in the mother's milk at different periods from the time of the birth of the child, consequently a standard artifical food that does not also vary, falls short of perfection. It does probably fall short of perfection, but the fact is, there is no practical difference in the composition of the mother's milk from the time of the beginning of lactation until the end of it. There are constant trivial differences brought about by indigestion in the mother—fatigue, unusual emotions, etc. Any of these things will involve the character of the milk to a certain degree, but they will not often involve it sufficiently to make any difference to the child; and the woman who has weaned a child may take the position of wet nurse, and the chances are will nourish it better than any artificial food. The changes that take place in the cow's milk have been said to be more important chemically than bacteriologically. There can be no such distinctions made, for bacterial growths always produce chemical changes.

The fact that condensed milk has been in the hands of some gentlemen particularly good, is only an endorsement of sterilization. It is evident to my mind that sterilization is not properly understood by some gentlemen, and when "sterilized milk" acted as a poison it had not been properly sterilized. Sterilization means more than boiling the milk. It means making it sterile and keeping it sterile. The milk as it comes from the cow is sterile. It is absolutely impossible to keep it sterile for any length of time in the marketable article of milk. It becomes necessary to sterilize it, and that can only be done just before the feeding of the child.

It is a fact that some children will thrive on almost any food; a fortunate fact. I know of children that from a very early

age, two or three months, have been fed almost exclusively on boiled barley. It has been often said that infants would not digest starch, but sometimes they will, though it is evident that starch is not as good a food for children as milk. The probable reason for the digestion of starch in the absence of a proper amyloid digestive apparatus is the mucus of the stomach and the intestines. The suggestion of one gentleman as to the time of putting the lime water in the milk, I do not think it calls for any particular discussion. It is to my mind only a matter of convenience. It is only important that it be put in. Infant's food's on the market, in my experience, have not been satisfactory. Those of them that are used with most satisfaction are used with milk, and the milk that is added to them, and the boiling that is usually directed to be done when making the mixture, makes a good food, because it is sterilized milk. Some of them have elements of nutrition that are suitable to the digestive capacities of an infant, but many have not. I have had a very annoying but instructive experience recently in the Rosalia Foundling Asylum. We have had constantly in charge from fifty to sixty infants under ten months old. About one-half of these children were fed on bottled food. The opportunity was excellent for the trying of a great many artificial foods, and we tried carefully, and with the help of skilled nurses and asistants, almost all the foods in the market, and none of them were satisfactory. The sterilized milk as prepared by Dr. Rotch's formula certainly suited these children best. I am satisfied that where it fails in a healthy infant the cause will be that it is not properly prepared and sterilized.

THE SCARLATINAL BUBO.

Drs. Combemale and Lamy have found in a case of cervical adenitis, of scarlatinal origin, going on to suppuration, that the pus, while entering such micro-organisms as streptococci and staphylococci, is not virulent. The microbes appear dead, or are at least deprived of the power of reproduction on nutrient media. Their observations lead them to believe that these microbian agents act more through their toxines, which call forth an abundance of leucocytes.—*Bulletin Méd. du Nord*, January 8, 1892.

Selected Formulæ.

ACUTE CORYZA.

Dr. Hayem, in the *Union Médical*, recommends the following inhalation in recent cases of acute coryza:

℞ Acid. carbol. pur..... 5.0 grammes.
Ammon. liquid. ..... 5.0 "
Aquæ.....15 0 "
Alcohol.....15.0 "
M.

A few drops of the solution should be poured on blotting paper and inhaled. It will be found to act pleasantly and give relief in the majority of cases, while in some it acts as an abortive. The following snuff is also recommended:

℞ Bismuth subnitri.....6.00 grammes.
Benzoin pulv.....6.00 "
Acid boric, pul .....4.00 "
Menthol.....0.2 "
M.

Vaseline and subnitrate of bismuth in equal parts will be also found a valuable application.

AN ANTISEPTIC SOLUTION FOR VAGINAL INJECTIONS.

L'Union Médicale states in its issue for February 29, 1892, that the following is used by Sunar for the purpose of rendering the vagina antiseptic:

℞ Beta-naphthol, ... 5. iv.
Alcohol, ... 5 xxx. M
Sig.—Make into solution and add a teaspoonful to a quart of water which has previously been boiled and filtered.

This mixture is then given as a vaginal injection, cold or hot, as the case may require it.

TURPENTINE IN ICTERUS.

Dr. Carceau (*La Semaine Médicale*, No. 12, 1891; *Lo Sperimentale*, No. 23, 1891) has recently used the essential oil of turpentine in all forms of icterus with hemorrhages and albuminuria, as Weil's disease, bilious fever, hæmoglobinuric fever, as well as yellow fever. He administers it as follows:

℞ Ozonized oil of turpentine, gms. 10.
Liquid vaseline.....gms. 36.
Inject subcutaneously.

The same quantity may be given in capsules, of which some sixty may be taken within thirty-six hours, thus taking two or three every half hour. By this means he has been able to cure the most severe cases of icterus accompanied by great albuminuria and convulsions.

BRONCHITIS IN CHILDREN.

Dr. Hare gives the acute stages of bronchitis in children:

℞ Tr. aconiti.....gtt. xij.
Syr. ipecac. ..... f. ʒssj.
Liq. potassii citratii.....q. s. ad. f. ʒiij.
M. Sig.—One teaspoonful every three hours.

For the latter stages:

℞ Ammonii chloridi.....ʒj.
Ext. glycyrrhizæ fl.....f. ʒiv.
Aquæ dest.....q. s. ad. f. ʒiij.
M.—Sig.—One teaspoonful three times a day.

HEART PAINS.

The formula which Dr. Liegeois especially recommends is as follows:

℞ Tinct. piscidæ erythrinæ.....gm. 60.
Tinct. verat. virid.,
Ext. aconiti rad. alc.....āā. gm. 15.
S.: 30 drops morning and night.

INJECTION FOR GLEET.

℞ Hydrarg. bichlorid..... gr. ½.
Zinci sulph. carbolat..... ʒ ss.
Acid boric ..... ʒ jss.
Liq. hydrogen peroxid.... .....fʒ iv.
Aquæ destillat..... .....fʒ vj.
M Use injection in the morning and evening.

Dr. A. Hewson, *College and Clinical Record.*

BALANITES AND BALANO POSTHITIS.

During the stage of inflammation:

℞ Sodii boracis.....ʒv
Aquæ Bullientis.....ʒviij
M. ft. Lotio
Sig. Retract the prepuce and cleanse thoroughly with the lotion. While still wet apply.

℞ Bismuthii subnitratis

Sig. Dust plentifully over and around the glans and then pull the prepuce forward to its natural position and allow it to remain thus covered for twelve or twenty-four hours, when the treatment can be renewed if necessary, daily.

To prevent relapses wash the part two or three times a week with the borax lotion.

Julias A. Faison, M. D.
Mount Olive, N. C.

TREATMENT OF DIPHTHERIA IN PARIS.

The following treatment of diphtheria in children is much advocated at present. The room is steamed with a solution as follows:

Phenic acid ..... ʒ ij.
Solicylic acid ..... ʒ iv.
Benzoic acid..... ʒ jss.
Alcohol..... ʒ iv.

A tablespoonful is put into a quart of boiling water and renewed every three hours.

As a local application:

Camphor..... ʒ v.
Castor-oil..... ʒ iv.
Alcohol..... ʒ iij.
Phenic acid ..... ʒ j.
Tartaric acid..... ʒ i.

—*Medical Press.*

ARABIAN BALSAM.

A good formula for Arabian Balsam is as follows:

℞ Take of
Oleum gossypium..... 15 ounces.
Oleum origani..... 1 ounce.
Oleum terebinth..... 4 drams.
Mix.

S. W. Rogers.
Harwick, Mass.

OUABAINE.

J. Sailer (*Therap. Gaz.*, November and December, 1891), who has investigated the physiological action of ouabaine, has arrived at the following results:—1. General action: On dogs and animals capable of vomiting it acts as a powerful emetic; it excites defæcation, perhaps by paralysis of the sphincters; it is probably a diuretic, at least it always causes urination in animals to which it is administered; it does not affect body temperature. 2. On the circulation, ouabaine produces first a slowing of the heart from stimulation of the cardio-inhibitory mechanism, perhaps also from direct action on the heart muscle. At the same time there is a vasomotor spasm sufficient in most cases to overbalance the slowed heart rate, and to produce rise of blood pressure. Next, there occurs sudden and great increase in pulse rate from paralysis of the vagi, and still further rise in blood pressure, with continued vascular spasm. Lastly, the heart itself is paralyzed, and death ensues. 3. On respiration, the drug probably acts by stimulating the respiratory centre, but only to a slight extent; respiration generally continues for some time after the heart has ceased beating. 4. On the nervous system (*a*) the drug diminishes and finally abolishes reflex action by paralysis of peripheral sensory nerves and nerve trunks; (*b*) motor nerves seem to be only exceptionally paralyzed, unless the drug be applied direct to them; (*c*) on the central nervous system the drug appears to exert no action. 5. Muscles are paralyzed by a direct action of the drug on their tissue. 6. On the dog the drug acts as a very powerful local anæsthetic when applied to the cornea in weak solution, and this without causing any inflammation, in man, however, it has been stated to produce much irritation when thus applied.

THE

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Leading Articles.

THE ANATOMY OF THE TONSILS, WITH REFERENCE TO THEIR SURGICAL TREATMENT.

Although we have but little knowledge of the physiology of the tonsils, we have practically to consider them as causes of many disturbances of function, as well as being the seat of acute and chronic inflammation. Their influence in the pathology of the naso-pharynx is especially great, and able observers have shown that many obscure troubles affecting these parts can often be traced to an abnormal condition of these organs. Consequently, it is important that we should have correct ideas of their anatomy, in order that we can intelligently treat them when they are the seat of disease.

The profession is indebted to Dr. Harrison Allen for a recent and very valuable paper upon this subject, which is entitled, "The Tonsils in Health and Disease," in which that able authority on diseases of the throat gives a more satisfactory account of the gross anatomy of the tonsil than is found in any of the standard text-books. The intent of his paper is best described in his own words (*Amer. Jour. Med. Sciences*, p 92, 1892.): "The object of this paper is to harmonize the descriptions of the normal tonsil with the accounts of its morbid conditions. It is an axiom in medicine that the best basis on which the clinical study of any organ can rest is on exact knowledge of its structure. I will endeavor to show that our conceptions of the tonsil are not in conformity with this axiom. Some of the descriptions of the tonsil have been drawn up from hypertrophied glands, some from atrophied glands, while the terms used by anatomical and clinical writers are often at variance with one another. I cannot recall any other structure in the body of which this can be said. This confusion does not arise from lack of

knowledge, for numbers of valuable papers have been written on the tonsil and its plan is understood. But the description of the mass is conventional and clinicians have not seen fit to depart from antiquated and often quite inaccurate methods of expression."

In the above quoted paragraph the author clearly indicates what is actually the case, when the various standard authorities upon anatomy are referred to, viz., that their descriptions of the structure of this clinically important organ vary very much from each other, and that, as a consequence, we do not possess clear ideas regarding the normal structure.

The fact is, according to Dr. Allen, there is considerable normal variation in the form of the tonsil, while its general morphological plan remains more or less constant, except in those cases in which it is completely masked by disease. The form of tonsils most frequently seen by him he describes as follows: "The variation which I have most frequently seen is a rounded or elliptical mass—of which the vertical is the largest diameter—placed in the tonsil space a little above the level of the tongue. The organ is slightly compressed from before backward, and consists for the most part of a pocket or crypt —whose walls are greatly thickened— directed downward. The anterior wall of the pocket is covered with mucous membrane which is every way similar to that lining the pharynx, along the side of which it sometimes extends as far as the tip of the epiglottis. Above the mouth of the pocket lies a mass which constitutes the 'tonsil' of common language. This alone is cryptose." From this it will be seen that the almond-shaped body, commonly described as the tonsil, is really but a portion of the tonsil. In addition to the foregoing, Dr. Allen describes a "second smaller, somewhat nodular body which is quite distinct from the foregoing," situated higher up and slightly back of the palato-pharyngeal fold, which he terms the "velar tonsil." The middle portion of the tonsil, situated above the main pocket as described above is very commonly, according to Allen, channelled by "numerous communicating passages," especially seen in the tonsils of children and which often run deeply into the gland. Haller, Luschka and Asverus also describe these slits and fissures, which in the adult are obliterated by hypertrophy of the connective tissue elements of the gland, with atrophy of the lymphatic follicles, so that the organ is reduced to hard nodular masses, which bear no resemblance to the original structure of the gland.

We need not dwell further upon the anatomical peculiarities which are so ably presented by Dr. Allen, and will refer the reader to the original paper.

Not only must we have a clear understanding of the anatomy of the tonsil to successfully treat the organ when it is in a diseased condition, but also the changes which age effects in its appearance. The tonsils are largest in childhood and atrophy after the age of 25 years. Their development, Dr. Allen thinks, has some relation to the "rate of dental development, and the small size of the jaw." Regarding the enlarged tonsils of children, the same authority lays down the following clinical rule for determining whether the enlargement is physiological or pathological: "No matter how large the tonsil may become, it need not constitute a clinical state unless respiration is impeded. If the child has nasal respiration, a natural form of chest, and roof of the mouth and the teeth regular, the tonsils are in a physiological condition; but if there is snoring respiration, irregular teeth, the habit of mouth breathing established, a high, narrow palatal arch being present, and the child be pigeon-breasted, then the enlarged tonsil may be said to constitute a clinical condition."

When it is necessary to excise the tonsil

there is considerable difference in opinion and of practice about the procedure; some advocate the removal of but a superficial layer of the organ, while others claim that the best results follow when the whole tonsil is removed. The weight of evidence is decidedly in favor of partial exsection, because it is a more simple procedure, the parts heal more rapidly, and it is not likely to be followed by such serious hæmorrhage as sometimes attends the extirpation of the whole organ.

The dangers of excision of the tonsil for acute abscess should not be forgotten, and in view of the frequent occurrence of fatal or alarming hæmorrhage in such cases, it should be carefully performed. Allen advises that the tip of the left fore-finger be inserted behind the tonsil, between it and the pharyngeal wall, and that the point of the knife be directed towards it. Good light and a firm position of the head are requisites.

EFFECT OF MERCURY ON THE BLOOD OF SYPHILITICS.

Bieganski (*Archiv für Dermatologie und Syphilis*, 24, Jahrgang, 1892), from a research upon the alteration of the blood incident to syphilitic infection, concludes that the syphilitic poison has no effect in altering the number of blood-corpuscles; that it increases the number of white blood-corpuscles, particularly the small mononuclear lymphocytes. At the same time the number of the polynuclear white blood-corpuscles diminishes. The hæmoglobin of the blood is distinctly lessened. On the administration of mercury, the blood count is subject to marked changes. These, however, are dependent upon the greater or lesser thickness of the blood, and are not due to any change or alternation in the nourishment of the patient. Murcury lessens the number of white-corpuscles, and renders the relation between the white and red almost normal. It is particularly the mononuclear white corpuscles which are diminished in number, the polynuclear cells again becoming more numerous. The quantity of hæmoglobin is distinctly increased by the administration of mercury.

Book Reviews.

A TEXT-BOOK OF THE PRACTISE OF MEDICINE FOR THE USE OF STUDENTS AND PRACTITIONERS. By R. C. M. Page, M. D. Author of "A Chart of Physical Signs of Diseases of the Chest," "A Handbook of Physical Diagnosis of Diseases of the Organs of Respiration and Heart;" Professor of General Medicine and Diseases of the Chest in the New York Polyclinic, etc. 8vo, 578 pp New York: William Wood & Co. Price, $4.00.

A careful perusal of this admirably concise treatise convinces us that it will be found a useful book for those for whom it was written. In these days of rapid progress in medicine, with the wonderful advances which have been made in the methods of clinical instruction, it is most desirable that the students who go to the great medical centres especially for bedside instruction should possess some reliable medium of information to which they can refer quickly for any needed points—this is the motive which prompted the author to compile the present volume; and it may truthfully be added, is clearly shown in the pages of the book itself. Brevity, conciseness, and clearness of expression characterize it throughout, while the style and arrangement have not been sacrificed in order to attain these results.

The initial chapter upon the normal conditions of the chest, followed by a digest of the diseases of the heart and blood-vessels, is a model of lucidness, and presents the essential facts involved in a consideration of them, and very little more. In the ætiology and pathology of aneurisms we notice the failure to mention the mycotic variety which Eppinger has so well described, and seen by Osler. Another important omission occurs in the space devoted to chorea, in which only the ordinary chorea of childhood is described without mention being made of the adult, hereditary and senile varieties of the disease. In a work of this kind, however, it is chiefly important that the main facts concerning disease should be untrammelled by too frequent reference to unusual or rare conditions, and probably many omissions which occur throughout the book have been intentional, and, in justice, it must be said that but few of them are important.

The chapter on dysentery would have been more satisfactory if the amœbic

variety had received attention, and the connection between this form and liver abscess noted. This condition has of late years received considerable study in certain quarters and is certainly deserving of mention in any work on the practise of medicine.

The author differs from many in advising the use of quinine vigorously for "the first week or two" of typho-malarial fever, for according to the investigations of our Southern physicians living along the Mississippi River we know that a few maximum doses given at the very beginning of the disease are just as efficacious, and that the further use of this drug is sometimes positively harmful.

One of the best portions of the volume is that devoted to the treatment of disease. In that connection with each affection the treatment is carefully reviewed, and many prescriptions of well-known value have been added with the idea that they will be of service to the young physician.

In general terms we think that the author has been successful in condensing in one small and elegantly bound volume the best part of our knowledge of practical medicine, and that his object "to facilitate clinical instruction and enable both physician and student to obtain, in brief, the most practical as well as scientific view of various subjects treated of in a work on medicine" has been attained.

CANCER AND ITS TREATMENT. By Daniel Lewis, A. M., M, D., Ph D., Surgeon to the New York Skin and Cancer Hospital, etc., Detroit, Mich.: Geo. S. Davis,

In this new volume of the Physician's Leisure Hour Series the author has added a most instructive little book. Within the limits of 123 pages he has grouped the main facts concerning the ætiology, pathology, symptomatology, prognosis, and treatment of the different forms of cancer. He does not increase the difficulties attending a comprehensive study of this affection by the use of many terms, and broadly includes under the term cancer all malignant neoplasms. The author has also made use of cases seen at the Skin and Cancer Hospital for purposes of illustration, as well as cases from his private practise.

The opening chapter refers to the medicinal agents which have proven of some value. Among these he mentions Chian turpentine, chloride of aniline and pyoktanin. The chapter devoted to the discussion of the development of cancer from non-malignant affections is interesting. In other chapters cancer of special regions is dealt with, and some interesting statistics are given. Special mention should be made of the part devoted to treatment, since it is wholly modern, well written and in accord with the best principles clinical experience has taught us. The brochure is an exceedingly creditable addition to the Leisure Hour Series.

Periscope.

THERAPEUTICS.

DIURETIN IN INFANTILE PRACTICE.

According to the observations of Dr. R. Demme, Professor of Pædiatrics to the Faculty of Medicine of Berns, diuretin may be administered in the daily dose of .50 to 1.50 grammes (7½ to 22 grains) to children of from two to five years old, and in daily doses of 22 to 45 grains in children of six to ten years. In infants less than a year old the drug is contra-indicated, as it easily provokes gastro-intestinal irritation in these young patients.

Care should be taken in prescribing diuretin, as it is liable to be decomposed by certain substances. M. Demme recommends the following:

℞ Diuretin.....gr. xxij
Distilled water.....M iij
Brandy.....gtt. x
Sugar.....grs. xl
M. Sig. To be taken in the course of the 24 hours in doses of one tablespoonful.

Dr. Demme's observations have convinced him that diuretin is a good diuretic for children, exempt for the most part of all unpleasant influence, and probably acting on the renal epithelium.

Under the influence of diuretin, the dropsy of scarlatinal nephritis disappeared more quickly than by the action of any other medicament. It suppresses very rapidly the anasarca and serous effusions in cases of mitral disease, when the compensation has been previously established by means of digitalis.

The diuretin was generally well supported and it had no cumulative action. However, in one case of generalized dropsy in a child of ten years, suffering from amyloid degeneration of the liver, spleen and

kidney, Dr. Demme has seen a morbilliform eruption with abundant diarrhœa, after the injection of 90 grains of diuretin in the space of four days.—*La Semaine Médicale*, Feb. 24, 1892.

PENTAL AS AN ANÆSTHETIC.

Brener, in a communication to the Royal Medical Society of Vienna, reports having used pental as an anæsthetic 150 times in his dental practice. Loss of sensation is produced before complete loss of consciousness. Usually the patient recovers quickly and easily. The effect is produced generally in one or two minutes, and requires ten to fifty grammes. According to Rogner in the *Wien. Med. Pr.*, 1891, and Hollander in *Nouv. Rem.*, 1891, the loss of sensation lasts about four minutes, and towards the end of the seventh minute passes away. There is no vomiting or other troublesome symptom during the inhalation, nor does headache or sickness occur afterward. The loss of consciousness comes on during the first few minutes with complete loss of voluntary movement. Rogner considers it the best antiseptic to use in minor surgery. In spite, however, of these favorable reports, Brener himself had a serious accident. A girl who required extraction of a tooth was placed under the effect of pental. She had only taken four grammes when alarming symptoms arose—syncope, apnœa, loss of pulse, and dilatation of the pupil. It was necessary to resort to artificial respiration to restore consciousness. This fact, as Basch and Dittel observe, proves that new anæsthetics, and especially those producing rapid narcosis, require great care in their employment.—*Lancet.*

LA GRIPPE.

Epidemic Influenza, according to Dr. C. F. Taylor, *Medical Standard*, spends its force upon the central nervous system—especially the spinal cord. The local manifestations are due to interference with its functions which produces the frontal headache, nasal pharyngeal, laryngeal and pulmonary congestion, cardiac irritability, myalgia, enteralgia and intestinal catarrh, priapism with erotic excitement and temporary paraplegia. Erotic excitement constitutes a well-marked symptom in the earlier period of the attack in a considerable portion of cases. The remedies in this disease are ammonium salts and camphor. By the intelligent use of these, with other indicated treatment, the cure is generally complete, and complications and sequelæ are not likely to occur. The new antipyretics should generally be avoided, except in very robust subjects and in the first few hours of the malady. The first remedy usually indicated is ammonium bromide, as long as there is much acute pain. The next most important is ammonium salicylate if there be fever alternating with chilly and sweating stages. If there be torpidity of the liver, the chloride should be used. If the kidneys require especial attention, the benzoate. If the patient cannot be seen often, he suggests the following, which he has used with satisfaction:

℞ Acid salicylici.....5 ii
Ammonii carbonatis, q. s. ad neutr.,
Ammonii bromidi.....5 ii
Glycerini.....5 xii
Ammonii chloridi.....5 ii
Ammonii benzoatis.....5 ii
Lip. ammon. acet.....5 xvi
Aq. menth. pip. q. s.....5 xlviii
M. S.—One tablespoonful in hot milk or water every two hours, until relieved, then reduce the dose gradually to a teaspoonful, no dose to be taken in less than two hours after eating. Should be made fresh when needed.

This may be beneficially alternated with a good camphor mixture. The heavily loaded tongue is well met with sodium sulphite. Rest should should be absolute and complete, both physical and mental. The busy man who keeps at his work as long as he can stand, then goes to bed to have his correspondence read to him, and to dictate replies is virtually committing suicide. As between rest and no medicine, and medicine and no rest, the influenza patient had far better take the former.

ACTION OF PARAFFINIC NITRITES ON BLOOD PRESSURE.

Professors Cash and Dunstan have reported to the Royal Society on this subject, their knowledge being derived from experiments on cats and rabbits. It was found that the well-known effect of a fall in blood-pressure produced by amyl nitrite is due to the direct action of the drug on the vascular walls causing the vessels to dilate, and not to its action on the vasomotor centre. The experiments which the professor made were of two kinds. In the first the head was cut off from the circulation, and amyl nitrite still gave rise to as great a fall of pressure as when the head

was included in the circulation. In the second series the drug was injected into the carotid artery, but prevented from reaching the general circulation by appropriate ligatures. The fall of pressure did not occur until these ligatures or clamps were removed. Experiments were also made on man with a view to ascertaining the order of activity for various nitrites when inhaled, and the result was the following order: (1) alpha-amyl; (2) beta-amyl; (3) isobutyl; (4) secondary butyl; (5) primary butyl; (6) secondary butyl; (7) primary propyl; (8) ethyl; and (9) methyl. All the nitrites produce a fall of blood-pressure and an accompanying acceleration of the pulse; the latter is not so marked after intravascular injection as after inhalation, and is also less marked in cats than in men. The respiration is affected temporarily during inhalation in various degrees by the different nitrites, and permanently by repeated administration of the same or different nitrites.

ON THE ACTION AND USE OF TINCTURE OF CALUMBA.

Nearly 130 years ago, Dr. Percival of Manchester ("Essays, Medical and Experimental," Vol. II.), drew attention to the value of calumba root in diarrhœa, and recorded five cases, showing its efficacy. He pointed out that the tincture was the strongest preparation, and by experiments on himself showed that it did not influence the circulation.

Schultz (*Thérap Monat.*, Feb., '92) publishes a series of observations on the use of calumba in health and disease, which do little more than confirm the conclusions arrived at by Percival. He notes one or two points of practical interest. Out of the five healthy people to whom he gave a preparation made by extracting one part of the root with ten of alcohol, he found that in one, daily doses continued for a week, and gradually increased from 25 minims to a drachm, were followed by stomach catarrh and a slightly relaxed condition of the bowels. Eventually there was extreme repugnance to the medicine. In a second case, the action of the bowels became very slightly incresaed by large doses of the tincture. In none was the circulation affected; the other three were not influenced at all by full daily doses. The cases seem to indicate that in some even tincture of calumba may slightly disturb the bowels if continued long in full doses.

Schultz records 14 cases in which tincture of calumba seems to have a distinct effect in checking diarrhœa and regulating the action of the bowels. Even in the diarrhœa of phthisis he found it successful. He gave it in doses of from 40 minims to 3 drachms usually once, but sometimes twice daily.

TREATMENT OF SORE THROAT.

It is now generally admitted and agreed that in diphtheria some form of antiseptic or at least aseptic treatment should be used, but for the simpler forms of throat inflammation, and the catarrhal as well as tonsillar troubles, which are supposed to be caused by cold, the treatment remains for certain doctors what it was—that is, chlorate of potassium or other gargles of an emollient or astringent nature—and yet the simple fact that these troubles are frequently seen in the same family, and at the same time as diphtheritic diseases, would seem to indicate a common origin. The infectious nature of tonsillitis and other simple forms of throat and bronchial disease or inflammation seems likely, and once this is suspected, if not proved, it should lead to trying antiseptic methods instead of the old astringents. The following is a formula much used in France:

℞ Acid. carbol., cryst.
Camphor,.....āā gr. xv
Glycerini,
Aquæ destill.,.....āā f ʒii

This is painted on the inflamed part three times a day. It will be found to have a mechanical action as well as an antiseptic one.—*Archives of Pediatrics*, December, 1891.

TREATMENT OF BUBOES BY INJECTION OF IODOFORMIZED VASELINE.

Dr. Le Jollec (*La Semaine Médicale*, No. 55, 1891), a physician in the French navy, has treated several cases of buboes with success by the injection of a 5 to 10 per cent. solution of iodoformized vaseline into the bubo.

TO REMOVE ANILIN STAINS FROM THE SKIN.

Unna recommends washing first with a five per cent. solution of salt in water, then with the same strength of hydrogen peroxide, and finally with alcohol.

MEDICINE.

THE DIAGNOSIS AND PROGNOSIS OF SYPHILITIC DISEASE OF THE BRAIN.

Dr. Otto Harmsen has been induced by the scarcity of information relating to syphilitic disease of the brain to publish particulars of nine such cases, which had remained under observation for a year or more in the Berlin clinic for nervous diseases. The *Archiv. f. Dermat. u. Syph.*, which publishes the account, points out that the meagre statistics of this affection have often been complained of, more especially by Naunyn. The chief symptoms in most instances were headache, vomiting, vertigo, facial paralysis, aphasia, and hemiplegia. In one case polydipsia and polyuria appeared some years after the primary infection, and serious cerebral symptoms quickly followed. In another case the nervous symptoms appeared as early as two years after the initial sore. Nearly all the cases were cured by energetic anti-syphilitic treatment, this being most marked in a patient never before treated with mercury. It should be mentioned that in many instances a temporary disturbance of the reaction of the pupil was the first and only indication of cerebral mischief, as has been pointed out by Oppenheim.

ESSENTIAL PAROXYSMAL TACHYCARDIA.

Dr. J. W. Brannan, in a paper upon this subject, refers to that form of tachycardia in which a very great exhilaration of the pulse, occurring in paroxysms, was the cardinal symptom. The paroxysm might last a few minutes, or it might extend, without interruption, over a period of several weeks. In the intervals between the attacks the heart-beat should be normal, both in force and in frequency, and the individual seemed to be in perfect health. There was no history of rheumatism, nor were any valvular murmurs detected. In 4 cases in which an autopsy was performed no anomaly was found. Dr. Brannan has collected only 27 cases of this rare disease. The attacks are characterized by extreme rapidity of the heart's action, which may attain 250 or even 300 pulsations a minute. It is very much like that produced by section of the pneumogastrics in animals. The pulse is usually regular, often not perceptible at the wrist, but to be found in the carotids and femorals. The attacks occur suddenly, as a rule, and at other times they follow some strong mental emotion or physical fatigue or effort. The face is usually very pale throughout the paroxysm, the pupils are normal. There may be moderate dyspnœa. Anorexia and constipation are present with almost complete insomnia. The subjective sensations are variable, and include epigastic oppression, pain at the precordia and numbness of the left arm or general chilliness. The attack ends sa abruptly as it began; the pulse dropping suddenly from 200 or more to 72 beats per minute: There is extreme cardiac distension as shown by the area of dullness. In discussing the ætiology of the disease, Bouveret has drawn attention to the entire absence of hysteria, or neurosthenia in the cases collected by him, and there was no hereditary neurotic tendency. Of the 25 cases in which the sex was noted, 11 were in males and 14 in females. Over-fatigue, either mental or physical, seems to be the chief cause of the affection.

PRECOCIOUS HEREDITARY CEREBRAL SYPHILIS.

Dr. D'Astros (*Journal de Médicine*, Jan. 2, 1892) in a communication to the Association for the Advancement of the Sciences, spoke on the cerebral localizations in the new-born, to which Fournier has already called attention. These cerebral manifestations present themselves under various aspects: syphilitic meningitis (rare and ill defined); syphilitic arteritis of the arteries of the brain (quite frequent); gummata (rare and often during the second infancy); syphilitic ependymatis or ventricular syphilis, of which latter the author has observed two instances. The onset was quite precocious (one month after birth), and death took place in less than a month. At the autopsy (an acute ventricular hydrocephalus was found with embryonal infiltration in the ependyma and the striated bodies. The functional importance of the corpora striata for the reflex life of the infant is perhaps the cause of this localization. The cerebral gummata and syphilitic cerebral meningitis and arteritis are relatively late lesions, especially the first two; syphilitis ependymatis is the most precocious form and the most characteristic of hered-

itary cerebral syphilis. Its evolution appears to bear a relation to the degree of infectiousness of the syphilis. It is made manifest by a variety of nervous symptoms, convulsions, contractures, tremblings, strabismus, and especially by acute hydrocephalus of rapid development which is characteristic.

DOUBLE CONGENITAL ENTROPION.

Guibert (*Arch d'Ophtal.*, February, 1892) reports the case of a female child, aged 3, with complete entropion of the lower eyelids, the free border with the lashes being entirely hidden; in consequence of the infolding the lids appeared thickened. This condition had been noticed by the mother eight days after birth. The eyes had not suffered from the abnormal position of the cilia, the corneæ were clear, and there was no conjunctival irritation. The operative procedure adopted consisted in cauterzing along the skin surface two millimetres from the ciliary margin of the lid, and penetrating all the tissues down to, but exclusive of, the conjunctiva. The result was quite satisfactory and six months later there was no return of the entropion. A point of interest noted by the author is, that when applying the cautery to the lids, no structure was met with representing the tarsal cartilage (so-called). The absence of this constituent of the lid was looked upon by Panas as the probable explanation of congenital entropion, and Guibert thinks it will explain the condition in his patient. There were no other discoverable congenital defects in his case, and no family history of such.—*Brit. Med. Jour.*

THE SPECIFIC GRAVITY OF THE BLOOD.

A fair amount of literature is extant upon the subject of the specific gravity of the blood, and among those who have contributed thereto may be mentioned Schmeltz, Landois, Lloyd Jones, Roy, and lastly, Peiper, the latter having recently recorded some observations to which reference may here be made. The specific gravity of the blood in healthy human beings varies but slightly—1045 to 1046—with an average which is somewhat higher for men (1055) than for women (1053) or children (boys 1052, girls 1050). In disease the variations may be relatively considerable, that is, from 1055 to 1068. In nephritis, chlorosis, and anæmia, also in maladies associated with much wasting, such as phthisis and carcinoma, the specific gravity is lowered, but in febrile diseases, and in conditions causing marked cyanosis, it is raised. The blood of birds is apparently heavier (1059 to 1075) than in man, while that of frogs is lighter (1034 to 1053). It is evident, however, that not much is to be gained by the estimation of the specific gravity of the blood in disease, as far as diagnostic or therapeutic purposes are concerned. According to the author, "the specific gravity varies considerably in different persons, so much so, that a specific gravity which is normal for one may be a sign of disease in another." Under these circumstances it would scarcely be possible in any given case to say whether an apparently abnormal record was pathological, or the usual physical condition of the patient's blood.—*Med. Press.*

RECURRENT ERYSIPELAS.

Critzman (*Arch. gén.de Méd.*, January, 1892) says that erysipelas is distinguished from other cutaneous infections by its property of extending superficially, and hardly ever into the deep and subjacent layers of the integument. It is caused by the streptococcus erysipelatis. This micro-organism is, perhaps, identical with the S. pyogenes, but the suppuration produced by the latter cannot be identified with the serous inflammation produced by the former. It is disputed whether phlegmonous erysipelas (a complex affection) is due to the exalted virulence of the S. erysipelatis, or is an expression of a secondary infection. Erysipelas is very rarely phlegmonous from the outset, and suppuration is really a complication. The type of recurrent erysipelas is seen in the catamenial form. It may occur as often as ten, twenty and more times. Repeated attacks give immunity against symptoms, but not against the disease. Critzman relates a case occurring in a woman, aged 35, suffering from uterine fibroid. She had the first attack of facial erysipelas at 30, since when she said she had an attack nearly every month. The one observed by him began with shivering. A piece of skin was excised by permission of the patient. The cultivation and inoculation experiments were successful in demonstrating the micro-organism. In sections from the skin the

disease was made out to be a dermato-lymph-angitis, and the streptococci occupied the lymph spaces and vessels. In some of the infective diseases, as enteric fever, syphilis, variola, a second attack hardly ever occurs, but in others recurrence does happen, only to name ordinary tonsillitis. Two conditions only are necessary for recurrence: (1) presence of the micro-organism; and (2) a suitable soil for renewed growth. In recurrent erysipelas the streptococcus exists, as is shown above. After an attack it loses its virulence for a time, but under influences not yet understood this virulence may return, and with it the recurrence.—*Brit. Med. Jour.*

NORMAL TEMPERATURE OF THE AGED.

Kelynack (Manchester) publishes in the *Medical Chronicle* (vol. xv., 1892, No. 5) the results of observations on the temperature of healthy old persons (eighty-two, eighty-three, and eighty-nine years of age), which tend to show (1)that the normal senile temperature, as registered both in the rectum and axilla, is very distinctly below that of healthy children and adults. 2. That the rectal or internal temperature in old age is almost always higher than the axillary, but varying from 0.2° to 1° F.

SURGERY.

TREATMENT OF POST-OPERATIVE INTESTINAL OBSTRUCTION.

Lucas-Championnière (*Rev. de Chir.*, March, 1892) reports five cases in which it was found necessary to perform laparotomy for the relief of internal strangulation following operation on the viscera of the abdomen. In the first of these cases the symptoms of obstruction were presented on the eighth day after ovariotomy, and were found to be caused by old adhesions of the intestine to a mass of the omentum. The primary operation in three cases was for the radical cure of hernia, and in the fifth case for strangulated hernia. The post-operative obstruction was due in three instances to adhesions, and in one to the pressure of a large intra-peritoneal effusion of blood. All these patients made good recoveries after the second operation. Mention is made of a case of fatal obstruction after an operation for the radical cure of hernia, in which, after death, a loop of intestine was found to have been strangulated by a peritoneal band. In cases of this kind it is often difficult to determine whether the patient be suffering from actual strangulation or from simple obstruction of the intestine. If it be clear that the bad symptoms following operation are due to mere obstruction, purgatives, the author holds, ought to be administered. It is not a rare occurrence for laparotomy to be followed by intestinal paralysis with fæcal retention, the paralysis giving rise also to symptoms of occlusion with stercoraceous vomiting. With the view of preventing this bad result, the author makes it a general rule to administer a purgative two or three hours after the performance of laparotomy, thus following, and, indeed, carrying out to a further extent the practice advocated by Lawson Tait. Since he has adopted this line of treatment he has not observed the rise of temperature and the symptoms of gastric disturbance which so frequently result when the patient is subjected to the influence of opium.—*Brit. Med. Jour.*

CARCINOMA OF THE CARDIAC END OF THE STOMACH.

King (*Canadian Practitioner*, Feb. 12, 1892) reports a case, which occurred in a woman, 77 years of age, resembles those just above referred to, in its latency. The patient was a woman who had been admitted to a house, not on account of illness, but to provide her with a comfortable home. Her symptoms were few, and of no special moment; her appetite was fair, and she never vomited. Two weeks before death, however, a severe coffee-ground hæmorrhage from the bowel occurred, and two slight attacks followed in the next ten days, and three days prior to death another. This was regarded as proceeding from the bowel, and so treated; but she died on the third day after. The stomach was fouud to be the seat of carcinoma in the lesser curvature at its cardiac end, where there was a cup-shaped ulcer, the size of a Mexican dollar, with sharp, clear cut edges. There was no involvement of the œsophagus whatever. Large numbers of secondary deposits were found in the liver. Fagge denies the existence of cancer of the cardiac end of the stomach. He thinks that all the cases begin in the œsophagus and spread thence to the stomach; but in this case there can, in King's opinion, be no doubt it was primary. The entire ab-

sence of symptoms, in a case which was evidently of long duration, the situation of the cancer, and the fact that the immediate cause of death was hæmorrhage, all tend to make this case worthy of notice.

ULCER AND CANCER OF THE STOMACH.

Dr. E. Kollmar, of the Medical Klinik of Tübingen, has an instructive paper in the *Berl. Klin. Wochensch.* on the Differential Diagnosis of Ulcer and Cancer of the Stomach. The cases related by Dr. Kollmar show that neither cachexia, nor even a palpable tumor in the epigastrium is sufficient to render the diagnosis certain. Liebermeister placed the greatest reliance on the duration of the disease, and the author is at one with him on that point. If any gastric disturbance persists for years, if there has been vomiting of blood for a great length of time, the case is probably one of ulcer. Cases have been observed in which a cancer has developed in the cicatrix of an old ulcer, but the author considers them so rare that they may be ignored. In one case a tumor was felt, and the history showed illness of thirteen years' duration, and cancer was diagnosed. The abduction, however, revealed an ulcer that had led to attachment to the pancreas, and this formed the tumor in the epigastrium. The second case was that of a woman with a twenty-three years' history of gastric mischief. Here, in spite of cachexia, a palpable tumor, and absence of hydrochloric acid reaction, a diagnosis of ulcer was given, and the patient in fact recovered. In another case in which advanced anæmia with cachexia was present, the long duration of the illness led to a diagnosis of ulcer, which was verified at the post-mortem examination.

OBSTETRICS.

THE TREATMENT OF ASPHYXIA IN THE NEWBORN.

Forest (*Medical Record,* April 9, 1892) describes a method for resuscitating asphyxiated infants as follows: He places the child on its face, its head down, and expels fluids from the mouth by pressure upon the back; the child is then put in a pail or tub of hot water in a sitting posture, supported by one of the operator's hands across its back, its head bent backward. The physician grasps the child's hands with his other hand, carries them upward until the child is suspended by the arms, leans forward himself and blows air into the child's mouth; the infant's arms are then lowered, its body doubled forward, and its thorax pressed between the hands of the physician. Air is thus expelled. Especial advantage is claimed for this method from the fact that the hot water maintains capillary circulation, and tends to assist in promoting the action of heart.—*Amer. Jour. Med. Si.*

CÆSAREAN SECTION IN EXTREMIS AND AFTER DEATH.

Winckel (*Aerztliche Rundschau,* No. 5, 1892) discusses this question, which appears to have been taken into consideration by political and legislative authorities in Bavaria. These authorities have endeavored to ascertain if it be justifiable to enforce upon practitioners the performance of Cæsarean section on women who die during labour. After collecting evidence, Winckel finds that the chances of saving the child are considerable, the gloomy prognosis of Fehling and others being set aside by recent experience. The best results have been seen when the child has been extracted within ten minutes after the death of a previously healthy patient from flooding, or of a woman ill but very shortly before the moment of decease (from convulsions of pulmonary embolism, for example). In these cases the child was delivered at or very near term. Living chiidren have, however, often been delivered by section and reared after the death of the mother from chronic cardiac or pulmonary disease. The longest period after death when Cæsarean section has saved the child is from twenty to thirty minutes (Pingler, Brotherston). Even when thet fœtal heart sounds have become inaudible, rapid section has saved the child. The best success, as might be expected, has been obtained in hospitals, where instruments are always in readiness. Winckel recommends Rung's instructions to be followed when death during labor occurs in private practice. Alter all, Winckel remarks, these cases are still rare, and therefore laws cannot well be framed at present to bind practitioners. All cases should be duly reported, and registration authorities should tabulate them especially and with great care as to notification of the result. When

the patient dies suddenly in the presence of the practitioner or just before his arrival Cæsarean section ought to be done at once with any instrument that is at hand. When the patient is sinking hopelessly from convulsions, apoplexy, etc., preparations should be made as complete as possible for the performance of Cæsarean section as soon as the maternal heart ceases to beat. There remains a grave class of cases where, after due consultation, it may be deemed justifiable to deliver the child by section, the patient being *in extremis*. Winckel refers to cases of severe dyspnœa, anasarca, etc. If the fœtal heart sounds can be heard, it may seem right to deliver the child by Cæsarean section, as the very slow death of the mother is more certainly fatal to the child than her sudden decease. —*Brit. Med. Jour.*

THE BACILLUS OF ECLAMPSIA.

The *Deutsche medicinische Wochenschrift* of May 12th contains the announcement that Dr. Gerdes, first assistant in the Pathological Institude to the University of Halle, has in a severe case of eclampsia succeeded in demonstrating by culture the presence of a short bacillus in the liver, lungs, and kidneys, and also in the blood. The bacillus is extremely virulent when inoculated in rats and mice, causing convulsions in the latter. In all the animals experimented on coma set in, the respiration became shallower, the body temperature became subnormal, and death occurred in a short time. In guinea-pigs convulsions only came on after intravenous injections (the jugular vein was selected for the purpose); subcutaneous and intraperitoneal injections produced no such effect. The bacilli referred to were found in great numbers in the lungs, kidneys, and liver of patients suffering from eclampsia, especially in the form of bacillary emboli, the starting point of which was probably a primary focus in the placenta. Dr. Gerdes promises a preliminary communication on the subject without delay.—*Brit. Med. Jour.*

GYNECOLOGY.

ICHTHYOL IN DISEASES OF WOMEN.

Eschen(*Gynek. op Obstet. Meddelelser*, 1891, vol. viii, p. 192) used this drug in twenty-five cases. Good effects were observed in patients with metritis, parametritis, and inflammation of the ovary, but it is admitted that no extraordinary effects were observed.

REPRODUCTION OF THE UTERINE MUCOUS MEMBRANE.

L. M. Bossi (*Brit. Med. Jour.*, Nov. 7, 1891) gives the results of an experimental study on the reproduction of the uterine mucous membrane after curetting, and after the permanent application of caustics (Canquoin's paste). He first performed laparotomy on bitches and then scraped away the mucosa in the neighborhood of the cervix with a Volkmann's spoon; in other cases the uterus was opened along its anterior surface, and different areas were completely denuded with a bistoury. In the cauterization cases sticks of Canquoin's paste were inserted into the corua and allowed to project a into the uterine cavity. After a varying number of days the animals were killed, the parts hardened in alcohol or in Flemming's solntion, and sections made.

Staining was done by alum and carmine, also by saffronine. Fifty animals were thus experimented on; the results in thirty-five only are relied upon in the following conclusions : 1. The uterine mucous membrane of the dog removed from large tracts and in its whole thickness, is completely reproduced after a time together with true glands.

2. This reproduction may be in some cases a slow process from causes not yet ascertained. 3. The new epithelium is derived from that of the glands at the margin of the wound. 4. Finally, the reproduced glands arise by proliferation of the cells of the new epithelium after it has become cylindrical. As regards caustics, Bossi comes to the conclusion that Tarnier and Polaillon, in their report made to the Paris Academy of Medicine in 1890, are in error in stating that they removed the mucous membrane in its whole thickness by caustics, They judged only from the expelled eschars and not from direct observation of the uterus. In all Bossi's cases there were incomplete stenosis of the cervical canal and complete stenosis of the cornua,and even signs of peritonitis. Microscopical examinations by the author showed the existence of an intense necrotic inflammation caused bv the caustic, which not only destroyed the mucous mem-

brane, but profoundly altered its glandular apparatus, so that it became impossible to say whether complete destruction would follow, or whether, a *restitutio ad integrum* being impossible, or difficult, grave chronic alteration would remain as the result. In contrast to this, in ten cases of removal of the mucous membrane, and in twenty other cases in which the uterus was laid open and the knife used, there were never any even incomplete stenosis, and never signs of peritonitis or grave inflammation of the uterine walls.

Accordingly Bossi emphatically asserts the superiority of curetting to the use of caustics left in situ, as regards both immediate and ulterior results.

PEDIATRICS.

CHRONIC PERITONITIS IN CHILDREN.

Henoch (*Deutsche med. Wochenschrift*, No. 1, January, 1892)does not believe, as has been taught by West, that nearly all cases of chronic peritonitis in childhood are of tuberculous nature. He does not see why the peritoneum cannot take on a chonic inflammation and cause a serous exudation into the abdominal cavity, just as the pleura takes on an inflammation. He calls particular attention to those cases which only show the presence of ascites, which may be very large in quantity. These cases progress as follows: The children are usually over 3 years of age; they seem to be quite well, do not complain of pain, nor is the abdomen tender to pressure. The only thing that the parents have noticed is an increase of the abdomen. An examination reveals free ascites (author has never seen it encapsulated in this form of cases). No cause for the ascites can be found in the liver, kidneys, or heart. Rarely is it traumatism. Tuberculosis can be excluded in many cases, from the general condition of the child and its ultimate recovery, although at times it may be very difficult to exclude this as a possible cause. The finding of tubercle bacilli, in the fluid which has been withdrawn is often a very difficult task, so that, although they are not found, we cannot say that the case is not tubercular, nor does the use of tuberculin help us in making a diagnosis. The majority of cases affected with this simple form of peritonitis are girls. In boys it occurs very rarely. This leads to the thought of a connection between the affection and genital organs, and it has been stated that a vulvo-vacinitis, which occurs frequently enough in children, may travel up to the uterus, thence to the tubes, and so on into the peritoneal cavity. These cases must be differentiated from a cirrhosis of the liver producing ascites, which can only be done after the fluid has been withdrawn and the liver then palpated; and from tuberculosis, which, as stated before, may be very difficult. The treatment of these cases is a purely surgical one. Medicines, puncture, etc., do little if any good. The ascites returns almost as fast as the fluid is withdrawn. Laparotomy, on the other hand, produces a rapid and permanent cure in these cases, as it often does in tuberculous peritonitis.

RICKETS IN AUSTRALIA.

Muskett(*Australasian Medical Gazette*, July 15, 1891.)says, rickets has been considered a disease of rarity in Australia; but that he has found it to be comparatively common, though as a rule of mild type. Acccording to his description there is nothing in the symptoms especially peculiar. The chief point of interest is the fact that this disease is frequently found by one who is watching for it, and who appreciates its symptoms in a locality where it was supposed not to exist. When the conditions are favorable the disease is sure to appear.

THE PROPHYLAXIS OF SCARLATINAL NEPHRITIS.

In more than a hundred cases of scarlatina seen in the course of six years, in in which the patients were for three weeks kept upon milk diet, Ziegler has not once encountered nephritis as a complication.—*La Semaine Méd.*, No. 4, 1892.

HYGIENE.

A DEFENCE OF TOBACCO-SMOKING.

It is considered by many that tobacco-smoking, like ladies' corsets, is indefensible on hygienic grounds, and that the only reasons for its practice, independent of a patriotic desire to aid the State in the consumption of a dutiable article, and so to in-

crease its revenue—are in the first instance the faculty of imitation, then habit, and over all caprice. It has fallen to the lot of a well-known hygienist of Rome, Dr. v. Tassinari, however, to demonstrate that tobacco-smoking fulfils a valuable hygienic function, viz., that of a powerful disinfectant, making it a prophylactic against a number of infective diseases. In order to show that he does not stand alone in his views, he quotes Drs. Miller, of New York, and Vassili, of Naples, both of whom are of opinion that tobacco-smoke prevents the development of pathogenic germs. A large number of independent investigations were made by Dr. Tassinari on the influence of the smoke of the noble weed on the germs of cholera, anthrax, and pneumonia.

His method of research was to line the interior of hollow balls with gelatine containing the germs of the diseases named: tobacco-smoke was then passed through these globes for from twenty to thirty minutes. The surprising fact was then established that at the expiration of the time the bacilli of true Asiatic cholera and of pneumonia were completely destroyed, whatever the kind of tobacco employed for the purpose. The gelatine was absolutely sterilized by the tobacco-smoke. The anthrax bacillus was more resistent, however, whilst the bacillus of typhoid was scarcely acted on at all. It is too much to expect that tobacco-smoke will destroy germs already domiciled in the system, but it will no doubt afford not a little comfort to smokers to learn that as far as it goes the practice tends to prophylaxis in the case of some of the most serious of the infective diseases.—*Med. Press.*

PASSAGE OF TUBERCLE BACILLUS FROM THE MOTHER TO THE FŒTUS.

Birch-Hirschfeld and Schmal have recorded a case which they consider is the first in which it has been definitely shown that in the human subject tubercle bacilli can pass from the mother to the fœtus. The patient was a young woman who, shortly after the commencement of her first pregnancy, began to exhibit symptoms of incipient phthisis; the disease assumed an acute form, and progressed so rapidly that the patient died during the seventh month of her pregnancy. Immediately after the death of the mother the child was removed by the operation of Cæsarean section. A post-mortem examination was made on the body of the mother. Advanced tubercular changes were found in the lungs, and also some miliary tubercles in the liver and other organs. The child had been felt to move after the death of the mother, but by the time the operation had been performed it was found to be dead. The thorax was at once opened, but the lungs appeared to be quite healthy. The body was then removed to the laboratory, the surface of the abdomen washed with perchloride of mercury, and the cavity opened by means of sterilized knives. No evidences of tubercle could be found in any of the organs. Small pieces of the liver, spleen, and kidney were removed with sterilized instruments, and placed in the abdominal cavity of two guinea-pigs and a rabbit. One of the guinea-pigs died in fourteen days; miliary tubercles were found in the peritoneum and large omentum. The second one was killed about six weeks after inoculation, and the same appearances were noted. The animal had appeared ill, it was feverish, and emaciating rapidly. The rabbit lived considerably longer—three months; after death, tubercles were found in the liver and lung. From these experiments it was evident that although no tubercular lesions could be found in the organs of the child, yet the latter were capable of infecting animals; and had the child survived, it would have undoubtedly developed tuberculosis at an early age. It is a point of great interest to read that tubercle bacilli were found in the umbilical cord and in the blood of the umbilical vein.—*Lancet.*

MEDICAL CHEMISTRY.

A NEW DEPARTURE IN FILTERING APPARATUS

E. Martin has recently devised the following improvement in filtering apparatus. An endless traveling band, made of any material suitable for filtering purposes, is so arranged as to assume for a portion of its length the form of an open horizontal trough or cistern. For this purpose the band is mounted in a manner to cause it to make a slight descent at one end, and and simultaneously to have the two sides or edges of the fabric turned up. In this form the band extends horizontally for a certain length, and is then made to rise again on an incline and to spread out flat.

In this manner a shallow traveling cistern is formed between the two inclines wherein the water for filtering is received.

The speed of the traveling band may be regulated in such a way as to allow it to be coated to any desired degree with the matter arrested from the filtered liquid, and on continuing to travel it may be conducted through cleansing apparatus, whence it will return cleaned and ready for the renewal of the operation.

REACTION OF SALOL.

According to *Journal de Pharmacie d Anvers*, the following is a characteristic of salol. A small quantity of salol is added to a few drops of nitro sulphuric acid. The mixture is colored yellow and on stirring with a glass rod it changes to brown and then to green. On diluting with about 50 gm. of water the liquid assumes a rose color, the green color reappearing on adding ammonia. Resorcin treated in the same manner gives a deep blue color; on dilution, red. In the latter solution, ammonia causes the blue color to reappear.

DELICATE TEST FOR ALUM IN DRINKING WATER.

E. H. Richards contributes to *Technology Quarterly* the following, which it is said, will detect 1 part of alum in 1,000,000 parts of water (1 grain in about 17 gallons): To 25 ccm. of water (concentrated from 1 litre or more if necessary,) are added a few drops of freshly-prepared logwood decoction; any alkali is neutralized and the color brightened by the addition of two or three drops of acetic acid. By comparison with standard solutions the amount of alum present may be determined. The logwood chips must be treated with boiling water two or three times before finally extracting for the color, as the first extraction gives a yellow color, the third or fourth a deep red.

A NEW SOLVENT OF CAMPHOR.

From the frequency with which the indications for the subcutaneous injections are met with it is evident that a good and reliable solvent for this substance is a great desideratum.

Ethereal solutions rapidly evaporate. Alcoholic solutions also evaporate and the camphor becomes precipitated, so that injections of such solutions produce severe pain or even abscess. Solutions of camphor in oil are difficult to employ, besides possessing the disadvantage of the liability of becoming rancid.

In the *Zeitschrift für Thèrapie* for September 1st, 1891, Dr. Karl Rosner recommends in the highest terms a solution of camphor in liquid paraffin, which, when slightly warmed, forms a perfectly clear and limpid solution. He states that he has kept this solution for more than five years without its properties becoming changed.

NEWS AND MISCELLANY.

INTERNATIONAL DERMATOLOGICAL CONGRESS IN VIENNA.

The second meeting of the International Dermatological Congress will be held in Vienna from the 5th to the 10th of September 1892.

Many of the most distinguished representatives of dermatology and Syphilography from all countries have promised to present papers and the indications are that the meeting will be a great success from a scientific standpoint.

The committee on organization, through the President, Prof. Kapesi, has extended a cordial invitation to the members of the American Dermatological Association and of the New York Dermatological Society and others interested in Dermatology in this country to be present.

The membership fee (five dollars) should be sent with titles of papers intended for presentation to the Secretary for North America, Dr. Prince A. Morrow, 66 West 40th street, New York, or to the Secretary General of the Congress, Dr. Gustav Riehl, Wien $^{1}/_{9}$, Bellaria Strasse 12.

A successful case of bone-grafting is reported from Allahabad, a solution of continuity in the anterior layer of the frontal sinus having been induced to take on osseous repair by sprinkling the surface with "small fragments" of the hip-bone of a newly killed dog.—*Med. Press.*

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Clinical Lectures.

ECLAMPSIA.

By DR. ROBERT OLSHAUSEN,
BERLIN, GERMANY.

PART II.

(*Continued from page* 5.)

THE PATHOLOGICAL ANATOMY OF ECLAMPSIA.

Gentlemen:—If we now proceed to a consideration of the pathological anatomy of eclampsia, I must first state that changes in the kidneys are found in all fatal cases.

In twenty-two cases of thirty-seven, I found in the kidney evidences of acute or subacute processes, which principally affected the parenchyma of the kidney, and then would either cause an acute fatty degeneration of the epithelium of the kidney substance (so-called "kidney of pregnancy") yet seldom affecting the glomeruli or else it would reveal itself in a severe change of the parenchyma. In two of these cases the pathological changes were only of a slight degree. In other cases there existed simultaneously a chronic interstitial nephritis, to which the acute changes of the parenchyma had been added. Five such cases were found. Four were found in which there was only the interstitial nephritis. In one case there was a chronic interstitial nephritis on the left side, and a recent parenchymatous nephritis on the right side. Usually the parenchymatous changes affected both kidneys. In the majority of cases of simple or complicated parenchymatous changes there were numerous apoplexies of the parenchyma; this also occurred in one case of glomerulo-nephritis.

In two other cases there was only a hyperæmia of the kidneys, although to be sure the patient did not die until the twenty-ninth post-partum day, and then with pneumo-thorax. In this case, the renal symptoms had doubtlessly receded.

In one case only were we unable to discover any pathological change in the kidney. The patient had had twenty-one eclamptic attacks, half of which occurred post-partum, and died on the fifth day after delivery, from pneumonia. Perhaps in this case also the pathological conditions of the kidneys had receded, for during the eclamptic attacks her urine contained large quantities of albumin (¾ of its volume) as well as many hyaline and granulated cylinders, renal epithelium and red blood-corpuscles.

In the last of the thirty-seven cases both kidneys were found diseased in an extraordinary way, and this case is of special importance in reference to the meaning of eclampsia, and of special general interest. The right kidney was a so-called "fœtal cystic kidney," only about the size of a pigeon's egg. The right ureter was of unusual smallness, and thread-like. The left kidney was hydroscopic in a high degree, so that it only consisted of a single pyramid. The left ureter, from the entrance of the pelvis up, was enlarged to the size of one's little finger. We shall return to a consideration further on.

I add to this description of the pathological anatomy of the kidneys that of the ureters. In the thirty-seven cases in which I performed autopsies, the right ureter was found dilated in five instances, but only moderately and without, or at least very slight, hydronephrosis. In one case I found slight right-sided hydronephrosis without dilatation of the ureter. In a seventh case, finally, there was a left-sided hydronephrosis with dilatation of the ureter, and at the same time a right-sided cystic-kidney.

More, even, than the frequency of the attacks, must their character or nature be taken into consideration. In such cases of eclampsia in which the disease appears at the end of birth, or more frequently even during the first hour after the birth, and then ceases after one or two convul sions—in such cases the convulsions are usually of a light nature.

On the contrary, there rarely occur cases of eclampsia, of the most unfavorable prognosis, which occur sometimes intra-partum and sometimes post-partum, in the intensity of the convulsion is the most important feature. In these, the attacks occur, as a rule, in quick succession, and nothing but the most energetic use of morphine will influence them in any way whatever.

Any great increase of temperature must be regarded as a most unfavorable symptom. In thirty-seven cases there was a rise of temperature of 39° C. or over, either during the attacks or in the coma that followed; of these thirty-seven cases, fifteen died, or 40.5 per cent. In twenty-seven cases in which the temperature did not exceed 39.9° C., there were nine deaths, or 33⅓ per cent.

The rise of temperature depends greatly upon the number of convulsions. This may be seen by the following: In thirty-one cases in which the temperature reached 39° C. or over, the average number of convulsions was fifteen, while on the contrary in one hundred cases in which the temperature did not reach 39° C., the average number of attacks was only nine.

Of still greater importance than the temperature, is the pulse. When the pulse increases in poorness, that is in smallness and frequency, whether during the convulsions or after they have ceased, it is always a bad symptom.

In the majority of cases the prognosis remains very doubtful, not only during the continuance of the convulsions, but also during the coma. Subsequent diseases must also be taken into consideration, among these may be mentioned lung troubles (pneumonia) and septicæmia, as playing the most important rôle. From the first cause three of our patients died, and from the last, four.

The frequency of sepsis in eclampsia may be seen from all statistics of the disease. Löhlein, out of one hundred and six cases of eclampsia, reports forty deaths and four cases of sepsis; Brummerstädt out of 135 cases of eclampsia reports fifty-one deaths and thirteen cases of puerperal infection. C. Braun, out of forty-four cases, reports nine of puerperal infection, five of which ended fatally; Schauta out of 90 deaths from eclampsia, reports that twenty-seven were from peurperal infection. In Löhlein's latest statistics, there were to be seen only four cases of sepsis and pyæmia in three hundred and twenty-five cases of eclampsia. Yet it is very possible that in the thirty different reports from which these statistics are compiled, this point may not have received special consideration in some of them. The frequency of septic infection may be explained by the frequency of operative interference, but may also be connected with a certain predisposition to septic infection, on the part of eclamptic subjects, similarly as acutely anæmic subjects are liable to septic infection.

The prognosis for the child is even worse than for the mother.

When we look aside from cases of pure puerperal eclampsia, and also from such cases of eclampsia occurring in pregnancy in which the disease did not terminate the pregnancy (5 cases), further also from such cases in which the death of the mother occurred, ante-partum (9 cases), and finally from those cases in which at the time of the interruption of pregnancy by the disease, the fœtus was not yet viable, there remain still (153) children, of which forty-three were brought into the world dead; giving thus a mortality of 28 per cent.

The number of convulsions and the frequency of their recurrence affects the life of the child even more seriously than that of the mother. After twelve or thirteen attacks the child usually dies, and often even long before this. Yet we have thirteen cases to report in which the children were born alive, although they had endured fifteen convulsions while yet in the mother. But the majority of the children who had lived through so many maternal convulsions, died the next day.

The narcotics which we are frequently compelled to make such free use of, are also undoubtedly deleterious to the child's life. After the use of full doses of morphine we have frequently seen the children born to the world deeply narcotised by the drug. Even when all signs of asphyxia

were absent, the respirations of the child were always shallow and slow, and its movements were few and torpid. Occasionally the pupil was fixed and contracted. Some of these children, although breathing regularly, could not be made to cry, by any exciting means.

A superficial examination of such children would lead one to believe that they were asphyxiated, but a closer view will soon reveal the true state of affairs.

THE THERAPY OF ECLAMPSIA.

The therapy of eclampsia has heretofore been one of pure empiricism. In distinction to the largely used treatment by chloroform anæsthesia, which has been so extensively employed, as it was also at this clinic, I prefer the use of morphine in large doses, as suggested by G. Veit. As an initial I give 0.03 gramme, hypodermically, and if the convulsions do not cease soon follow it by additional doses. In the course of treatment we seldom give over 0.06 gramme, or indeed altogether, although in cases that progressed chronically we have, during the course of several days given much more; in one case giving as much as 0.27 gramme in four days, with good results to the mother.

When the condition of the pupils or of the pulse would indicate that the further exhibition of the drug is not advisable, and in case the attacks still continue, I substitute chloral, by rectal injection, in 2.0 or 3.0 gramme doses.

The use of chloform seems eminently suited in those comparatively rare cases, where the attacks return after pretty regular intervals. In all other cases one must either prolong the anæsthesia for a very long time —which to us does not seem advisable—or else administer an anæsthetic at the first intimation of the approach of an attack; in this latter case, however, the remedy always comes too late to abort the attack.

During the continuance of the eclampsia, we make no use of either diaphoretics, bromides, wet-packs, or baths. Indeed we shun all unnecessary handling of the patient, because this only too frequently will excite an attack. There have been cases in which a careful digital examination of the uterus, the expression of the placenta, a change of the patient's bedding, and even the puncture of the hypodermic needle have been sufficient to excite a convulsion.

When in deep coma, the rattling in the upper air passages becomes continued, asphyxia is imminent. This can be prevented by bending the patient forward over the side of the bed, so that the head is greatly lowered. In this way very large quantities of mucous will be discharged from the mouth, the respiration will become free and the cyanosis will disappear. The mucous may also be removed with small brushes of cotton or small sponges, which are inserted into the flames, one after the other, by the dozen. In this way the same results are obtained. In many cases I feel convinced that we have saved our patients from an immediate death from asphyxia by these means. I also claim the great importance of the watchful care of a physician at the bedside of the patient, so as to be always ready in case of any such emergency. In Löhlein's recent publication on the subject we may read that Schatz recommended the frequent sinking of the head of eclampsties, but apparently not for the same reason.

Regarding operative interferences, v. Herff's* recently recommended practice of rupturing the amniotic sac in order to accelerate the birth, is at all events worth the trial, and in multiparæ may be regarded as a pretty certain means of accomplishing this end. The frequent use of the forceps in cases of well dilated cervix with a deep position of the head, is equally recommended on all sides. Version, for instance, in cases of a contracted cervix, and extraction with the aid of free incisions, does not seem to me to be recommendable. On the contrary, I consider Cæsarean section as practiced by Halbertsma and Kaltenbach—the requirements of v. Herff being fulfilled—as a both justifiable and valuable procedure. The requirements of v. Herff are to the effect that if the child is still alive in a severe case of eclampsia, and a natural birth is impossible, or the dilatation of the cervix is delayed, then this operation is justifiable. Now, when the mortality of the operation has been so greatly reduced, a successful result is very possible.

In how far the use of the forceps and version affect the mortality, I should like to elucidate by giving the following data: Out of sixty-four forcep deliveries, ten

*v. Herff, *Berliner Klinik*, Heft 32, 1891.

died; while in nine cases of version, five resulted fatally.

If we look aside from the ten deaths occurring ante-partum, the mortality table might be arranged as follows:

In 111 spontaneous births, there were 24 deaths, or a death rate of 21.6 per cent.; while in 77 of instrumental deliveries, there were 16 deaths, or a death rate of 20.8 per cent.

Among the last were included at least three cases of sepsis. If those cases in which version was used were to have been excluded from the statistics, the death rates in favor of the operative births would have been still more favorable.

That the termination of delivery beneficially affects the disease—since in a large number of cases the attacks then quickly cease—is denied by both Brummerstädt and Schauta. But all the same the clinical facts undoubtedly point to the beneficial influence of a speedy termination of the birth. If I search through my own cases and see what sort of an answer they would return to such a question, I find the following:

In seventy-three cases of spontaneous births, no attacks occurred after delivery in forty-three cases, and three or over in thirteen patients.

In seventy cases of operatively ended pregnancy, no attacks occurred after delivery in forty-nine cases; one or two attacks in twelve cases, and three or more attacks in nine cases.

In 143 cases, the eclampsia ceased with the completion of delivery in ninety-two cases. It returned once or twice in twenty-nine cases, and more than three times in twenty-two instances.

In about 85 per cent. of cases the eclampsia ceases with delivery, or else soon after.

(*To be continued.*)

CHOREA.

Out of a total of 18,074 children treated in five years at the polyclinic of the Charité in Berlin, Meyer found 121 instances of chorea, or a proportion of 6.6 per cent.; 11 of these cases (nine per cent.) were at the same time rheumatic; 3 had, along with their rheumatism and chorea, an organic affection of the heart; 13 (ten per cent.) had chorea and heart disease without the rheumatism.—*Berliner klin. Wochens.*

THE OPERATIVE TREATMENT OF CLUB-FOOT; THE DIAGNOSIS AND TREATMENT OF HIP-JOINT DISEASE.

By A. M. PHELPS, M. D.,

PROFESSOR OF ORTHOPEDIC SURGERY, N. Y. POST GRADUATE MEDICAL SCHOOL AND HOSPITAL, NEW YORK CITY.

Gentlemen:—I shall first operate upon this case of double congenital club foot. This little baby 7 months old, has a talipes equino-varus of the left foot, and a varus of the right. Instead of treating it for many months by instruments, I propose to divide at once the contracted parts, placing the foot in a super-corrected position, and dressing it with plaster of Paris. We can accomplish more in a few moments in this way, with equally good result than can be done by three or four months of careful treatment with the best machines that have ever been devised. Always remember in operating for club-foot: First, to manipulate the foot thoroughly in order to overcome the contract*ed* parts; this will put the contrac*tured* parts on the stretch; secondly, perform subcutaneous tenotomy on the parts which first offer resistance, and in the order in which they became contracted, beginning with the tendo Achillis. Having severed this tendon, pull the foot as nearly as possible into position; then cut another resisting portion, then manipulate the parts again before cutting any further, and if you find that the skin, is short and resisting, make an open incision, beginning just in front of the inner malleolus, and extending one-third the distance across the foot, putting the deep parts on the stretch by manipulation and then cutting them if necessary. If this fails to relieve the deformity, do a linear osteotomy through the neck of the astragalus; if this fails, remove a V-shaped piece from the astragalus; failing in this, remove the cuboid and scaphoid; and if you are still unsuccessful, perform Pirogoff's amputation. Of course, I am talking to you about extreme cases when alluding to amputative extensive osteotomy.

Having now divided the tendo Achillis in the right foot of our little patient, I shall endeavor to put the foot in a super-corrected position of calcaneus. As this cannot be done, I again introduce my tenotome through the same incision, and di-

vide any contracted bands that may be present. The abductor pollicis and the plantar fascia are next divided, and after further manipulation, I find that the long flexor of the great toe is short, so this is divided, and I am now able to super-correct both the varus and the equinus. To stop short of this, would be a great mistake. The foot is now dressed with Lister's "protective," and gauze, "bunching" it up over the wound on the plantar surface so as to make a little more pressure at this point, and so control the oozing of blood from the divided muscular branches. A gauze bandage, and a plaster of Paris dressing complete the dressing. It is only necessary to cut the plantar fascia in the left foot, and apply the same dressing. Only do open operation when subcutaneous ones are not safe nor efficient.

I shall next invite your attention to the general principles underlying the diagnosis and treatment of hip joint disease, and I shall begin by showing you this little girl with double congenital dislocation of the hip as I shall again allude to it when speaking of differential diagnosis. This child is wearing a machine which I devised, and which consists of a band around the hips, and two perineal straps, with adjustable and even pads so arranged that greater or less pressure may be made over the great trochanters, thus pressing them firmly against the ilium, and overcoming the tendency of the head of the bone to slip up on to the dorsum.

Our next patient is a little girl with true inflammatory disease of the hip joint. The joint is extremely sensitive, and is filled with fluid. Now, what are the general symptoms of joint disease? They are, pain, heat, swelling, pain on joint pressure, limited motion, spasm of muscles, atrophy, and deformity. What are the symptoms of hip-joint disease? All of these eight, and a few others. Patients with hip-joint disease have pain in the *knee*, flattening of the buttocks, obliteration of the gluteal fold, flexion of the limb, and in the first and second stages, abduction and apparent lengthening. If there be true disease of the bone, there is also atrophy of the limb; Barwell of England first called attention to this fact. In the case before us, there is no difficulty in determining an increase of local temperature, the presence of swelling, and the limitation of motion. To ascertain whether or not there is abduction, place the patient on the back in such a position that a line drawn between the anterior superior spines of the ilium will be parallel to another line drawn across the body at a higher level, and then noticing the position of the limbs with reference to the median line. In testing for flexion, we place the limb so that the popliteal space touches the table, when we find that the buttock arches very slightly, showing that there is still in this patient a little flexion. Thomas's method is also a good one. This deformity is due to spasm of the iliacus and psoas muscles. There is also some atrophy of this child's limb. The symptoms, then, would lead you to believe that this child had joint disease, but we would have nearly all these symptoms with sacro-iliac disease, or with disease located in the acetabulum external to the joint. If with your hands pressing firmly both iliac crests towards the median line, pain is not elicited we may know that there is no sacro-iliac disease. If the disease was located external to the acetabulum, or was extracapsular, you would have all the symptoms present in this case, *except pain on joint pressure.* But we have not yet differentiated between disease of the bone and of the soft parts. I know that there is disease of the bone here, because of the rapid atrophy of the soft parts. When the terminal plates of the nerves within the area of disease are pressed upon, the muscles supplying the diseased joint are, by reflex action, thrown into spasm; but when the soft parts are diseased, on account of their elasticity, but little pressure is made upon the nerve plates, and hence there is slight muscular spasm, slight deformity and slight atrophy.

Let us now differentiate between a true inflammatory disease of the joint, which has resulted in destruction of that joint, with possibly a dislocation and a case of congenital dislocation of the hip, or one of intracapsular fracture, or a diastasis of the head. If the great trochanter be above Nelaton's line, namely, a line drawn from the anterior superior spinous process of the ilium to the tuberosity of the ischium, you may know that there is a dislocation, a diastasis, an extracapsular fracture, or hip-joint disease. This child's great trochanter does not project above Nelaton's line. Many cases of hip-joint disease come to you after dislocation has taken place, and you will find from two to four

inches of shortening. How shall you distinguish between them and a case of congenital dislocation of the hip? Let us look again for a moment at the first case, the little girl with congenital dislocation of the hip. You would look for limited motion in every direction in case of hip-joint disease, but on examining this case, I find nearly perfect motion, no history of inflammatory action, and I can both feel and see the head of the bone as it rotates. If the dislocation were due to inflammatory disease, we would expect to find the head of the bone held up against the lium, and probably not smooth, but more or less distorted. Is this a case of diastasis, or a true case of dislocation? I know it is not a diastasis, because I can feel the head of the bone, and because when I rotate the limb, the trochanter rotates in a circle, which it would not do if there were a diastasis. The mother says there has been no injury, hence, the condition must have occurred at birth, or in utero. No method of treatment with which I am familiar will effect any great improvement in the condition of such a case of double congenital dislocation of the hip short of an operation, and the contrivance for making pressure on the trochanters seems to me to be as useful as any yet devised. If there be a difference in the length of the limbs, of course, this should equalized by a high shoe.

Now, in regard to the treatment of hip-joint disease, let me, in the first place, impress upon you that it is a surgical law which no general or orthopedic surgeon should violate, *that when a part is inflamed, that part should be put at rest until it is cured, no matter how long a time may be required to effect this.* Another important rule is, *overcome the spasm of the muscles operating upon the joint*, as this spasm produces *great intra-articular pressure*, and will certainly result in the destruction of the joint if not controlled by traction exerted *against the contracted muscles.* To do this, you must make not only longitudinal traction in the line of the deformity, *but also lateral traction in the axis of the neck to overcome the spasm of the adductors and the abductors.* Another important point is, *when will you begin passive motion? Never.* I care not how long you keep the joint immobilized, *it will not be anchylosed, because of the rest you give it;* but *if anchylosis does occur*, it will be *on account of the duration, severity and extent of the inflammation, and the subsequent cicatricial contraction, and no amount of passive motion will prevent this after this cicatricial contraction has once begun.* Therefore, I say, put all patients with sensitive joints *to bed, and also those having deformity*, because you can overcome the deformity more quickly with them in bed. After the deformity has been reduced, and all tenderness has disappeared, put the patient on a lateral traction fixation splint. *Never allow them to walk upon the splint until cured, for the constant trauma produced by walking will prolong the disease, and more than fifty per cent. of such cases so treated have anchylosis, and hardly a single case will recover without deformity;* hence, *you must use a high shoe on the well leg, and not allow the splint to touch the ground.* These are the principles of treatment, and if faithfully carried out, I think they will enable you to obtain far better results than have hitherto been observed in hip-joint disease. We seldom see anchylosis and our cases are treated as I have suggested. All recovered without angular deformity.

Another important question which will confront you is, when shall you operate upon an abscess? *I answer, just as soon as you are sure pus is present, except when the abscess causes no disturbance, there is no tendency to burrowing, and occasionally also where the abscess is so located, that if opened, the ring of the brace would press upon the wound. "An empty house is better than a bad tenant," and I have never regretted opening an abscess.* Having incised an abscess, you can then *introduce your finger*, and ascertain positively the exact condition present. *You may find the head of the bone separated from the shaft, or you may find positive indications for an incision, at any rate, by opening an abscess, you are made master of the situation.*

In connection with the subject of immobilization and anchylosis, I would like to show you this man, who is *said to have had inflammatory rheumatism*, and whose *entire spine* is *anchylosed*; yet, *his spine has been constantly moved and subjected to all kinds of massage*—the very plan which is supposed to prevent anchylosis, but anchylosis has resulted. *Are you going to*

bow down humbly to established precedent, or are you going to accept these facts, and shape your treatment accordingly? Contrast this with the next patient, a man who had an effusion in the left knee joint, *nine months ago*, and whose limb was put up in plaster of Paris, *first for five months*, and subsequently again *for four months*. The splint has been removed today, and you see that there *is no anchylosis* in this knee joint *notwithstanding such prolonged immobilization*. If you consult Dr. Sayre's book on Orthopedic Surgery, you will find a case of hip-joint disease reported, in which a child was kept in a wire cuirass for a few months, and the child not only came out with anchylosis of the opposite hip, but of the joints of the opposite extremity, and of the entire spine, and this was attributed to the immobilization; yet strange to say, the side in which the disease existed, recovered without anchylosis. A mistake in diagnosis was certainly made. *By all means do not employ passive motion*, but *active motion*, after the patient is cured; let the patient loosen up the joint, his feelings will regulate the degree of motion. Passive motion will probably excite a fresh inflammation, which will probably result in anchylosis.

The last patient I shall show you is a physician, forty-one years of age, who had an extremely severe form of talipes equinovalgus. I could not straighten the left foot, you will remember, after the open incision, or by manual force, but with the aid of a powerful club-foot machine, I succeeded in pulling the heel down, and I think the result will be very satisfactory. You will remember that we divided the nerve; it is always better to cut a nerve than leave it upon the stretch, for sensation will invariably return. In this patient, it is already beginning to return.

Without the machine, some form of osteotomy would have been necessary, but as there is a mortality of from three to five per cent. from osteotomy, it should be avoided whenever possible. If you follow the rules already laid down, you will probably be able to avoid it in about ninety per cent. of all your cases. The open incision has its legitimate place in surgery, between subcutaneous tenotomy and osteotomy. This patient was my two hundredth case, and I have never heard of a single death from this open incision method.—P.S. Three months later the patient was discharged with perfect feet.

THE INFLUENZA WAVE IN EGYPT.

The influenza wave which attacked Egypt on the Mediterranean border of the Delta, after gradually spreading southward, has now reached the Soudan, into which it is apparently disappearing. The influence of the disease on the mortuary returns was first apparent in Lower Egypt in the week ending January 14th last, when the death-rate went up from an average of 41.9 for the preceding six years, to 52.8 per 1,000 in nineteen of the principal towns. The high rate steadily increased up to February 4th, when the rate was given as 71.9, against the average of 42.8. The following week it began to diminish, but it was not until the week ending March 24th that the normal rate of mortality was again reached. During these eleven weeks the deaths of 358 natives and 24 Europeans were reported as directly due to influenza. In the eleven towns of Upper Egypt, from which returns are furnished, the most southern being Esneh, the death-rate did not show any increase till the week ending February 18th, when it rose to 46.9, the average being 37.1. The highest rate reached was during the week ending March 10th, when 55.6 per 1,000 was recorded; but at the date of the last return, that is, March 31st, it was above the average, being 49.8. In these eleven towns the number of deaths ascribed directly to influenza during the period was 45. The military report from Assouan show that between February 14th and 27th 44 cases of influenza were treated among the soldiers, while at Wady Halfa the number was 132, with one death. From the latter date to March 19th, 3 fatal cases occured at Assouan, and 173 at Wady Halfa; and at the latter station there were 5 deaths. There were only 4 cases left under treatment, so the epidemic may be looked on as almost extinguished as far as the military are concerned. In the week ending April 7th the mortality in Upper Egypt fell to 43.9 per 1,000, although there were 5 deaths said to be due to influenza. At Wady Halfa, on April 9th, there was a clean bill of health from the military hospital as far as the epidemic was concerned, but since the date of the last report there had been 3 deaths.—*Brit. Med. Jour.*

Communications.

REPORT OF A FEW LAPAROTOMIES DONE IN THE ALLEGHENY GENERAL HOSPITAL. BY R. STANSBURY SUTTON, M. D., GYNÆCOLOGIST TO THE HOSPITAL.

By MARK A. RODGERS, M. D.

Before submitting the reports of these cases, I shall attempt to describe the operator's technique.

The method employed by Dr. Sutton for the disinfection of the skin, is that which has been described at various times by Mc Lean and Welsh of the Johns Hopkins University, with slight modifications. Without pointing out these modifications I shall describe the method as used by Dr. Sutton:

1. The forearms and hands of the operator and his assistants are vigorously scrubbed with a coarse sterilized nail-brush, warm water and soap, for several minutes; nails pared and cleaned.

2. The hands are then placed in a strong solution of potassium permanganate for one or two minutes, after which the excess of this solution is washed off with distilled water.

3. They are then placed in a freshly prepared solution of hyposulphurous acid until decolorization is effected.

4. They are then immersed in distilled water.

The hyposulphurous acid solution is prepared by mixing just before using, concentrated solutions of oxalic acid and hyposulphite of soda; the result being the formation of sodium oxalate and the liberation of the acid, which has great decolorizing power, and quickly removes the stain of the permanganate.

The remarkable point to be observed in this process of disinfection is the absence of corrosive sublimate. The results as will appear from the following report apparently justify its omission.

As an additional precaution, the surgeon, his assistant, the nurses and all who are in any way engaged in the operation, receive prior to entering the operating room, a bath, after which they are dressed in sterilized wash clothing.

The abdomen having been prepared with all attention to the details of modern asepsis, the patient is placed after anæsthetization on an Edebold table. The abdomen is opened by three incisions, as follows: The first exposes the linia alba; the second the peritoneum, and the third after the arrest of hæmorrhage, opens the abdominal cavity. The time occupied by this part of the operation is usually from ten to fifteen seconds. The incisions are made by a long continuous sweep of the knife, and the length of the incision has therefore not much effect upon the time required. The cavity opened, the operation proceeds, of course, as required by the existing condition. The general points being, that flushing, sponging and drainage are to as great an extent as possible evaded; that chemicals are never used within the peritoneal sack under any circumstances. Hæmorrhage is controlled by the usual methods—torsion, suture, ligature, sponge packing, hot douche or in extreme cases, styptics. Occasionally despite these measures persistent oozing has to be dealt with, and under such circumstances drainage is reluctantly resorted to, combined with extra-abdominal compression after closure of the wound.

Silk, which is completely soluble in a concentrated solution of potassium hydroxide, is the material used for ligature. The abdominal wound is also closed with silk, with if necessary superficial sutures of silk or cat-gut.

The dressings are extremely simple, consisting of eight layers of sterilized gauze, which after removal from a solution of 1:500 bichloride of mercury, have been rung out in three changes of distilled water. On this is placed a layer of aseptic cotton and the whole held in place by a many-tailed binder. This dressing is not molested under ordinary circumstances until the seventh day, at which time every alternate stitch is removed; on the eighth day the remaining sutures are withdrawn. At this time union has usually taken place throughout by first intention. A single layer of gauze is now applied and held in place by adhesive strips, which also serve to support the wound. This is only changed for the remaining few days as cleanliness or the patient's comfort dictate. On the fourteenth day the patient is usually allowed to sit up, and a few days later leaves the hospital.

The operating room is a model. Through the liberality of Mr. D. E. Park, a member of the board of directors of the hospital, an operating room has just been completed for the Gynæcological department, which is probably, both from an esthetic and practical point of view second to none in this country. It is situated on the third floor of the building and is accessible from all floors by a hydraulic elevator, large enough to carry comfortably a bed or operating table and attendents. The room has a southern and eastern exposure, the high elevation besides giving a good quality of air and making ventilation consequently perfect, gives excellent opportunities for lighting, which in the Smoky City is a matter of no inconsiderable moment. But this element has been bountifully supplied by the designer, Dr. Sutton. The entire front is of glass; there is also a large glass plate in the front eastern exposure. The floor is of white Georgia marble and the walls support a six-foot wainscot of the same material. Above the marble the walls are finished in lead of a delicate blue hue, which is tastefully offset by the ceiling in white. On the eastern aspect from before backward are respectively the glass, a large sterilizing gas range embedded in enameled porcelain bricks, and a six-foot horizontal slab of marble, in which are set three basins; the latter is surmounted by a large highly polished copper reservoir for hot water. The plumbing is in brass, making the beautiful contrast which is so familiar.

Adjoining this and connected with it is a room of smaller dimensions, finished by Mr. S. P. Harbison, also a member of the hospital board, in exactly the same manner, with the exception that the wainscoting is here four instead of six feet. This admirable little apartment, is used as an anæsthetizing, dressing and examining room.

The facilities for operating are exquisite. The material of the floor and walls permits the practice of the most thorough measures known for disinfection and the establishment of perfect asepsis.

Since the election of Dr. Sutton as Gynacologist to the Allegheny General Hospital I have had the pleasure of assisting him at the following operations at that institution:

Case No. 1.—Ovariotomy. Diagnosis: Multilocular cyst of right ovary. Admitted to Allegheny General Hospital, March 23, 1892.

History.—Patient Mrs. G., aged 55 years, had given birth to four children, the youngest at that date being something over thirty years of age. Family history negative.

Personal history.—No history of dystocia or menstrual disturbance. About one year prior to admission to hospital, patient's attention was attracted to tumor-like mass in lower right abdomen, which rapidly grew in size until the (then) present time, when she applied for admission to the hospital for purpose of having operation done.

Operation March 26, at 9 A. M. Abdomen was laid open from umbilicus and cyst delivered after the method of Peon. Proved to be cyst of right ovary, multilocular, weighing 16 pounds. Pedicle was rather broad and was ligated with silk. Left ovary was found to be in a state of cystic degeneration and was also removed. Omentum was adherent to abdominal parietes, cyst and intestines had bled freely; hæmorrhage controlled by silk ligatures. Abdomen flushed and closed. Time of operation, thirty minutes.

Patient rallied well; temperature same evening 99 4-5° pulse 104. Rested quietly and passed gas during the night. On the third day uncontrollable emesis set in which became fecal on the seventh day. At the appearance of the latter symptom, no movement of the bowels having occurred, the patient was placed on the operating table and an incision made in the left inguinal region, and a protruding portion of the ileum stitched to the abdominal wall. An incision was then made into the gut, which was followed by a very large watery evacuation, with much flatus. At this time stitches were removed from primary wound, union having taken place throughout by first intention. The opening of the ileum was followed by a temporary improvement in the patient's condition. The emesis ceased and she partook of considerable nourishment and stimulant. Four days after, however, the emesis returned; patient became exhausted, passed into a typhoid state and died on the fourteenth day.

At the post-mortem the ileum, colon and rectum were found to be in a condition of gangrene. There was no effusion or other evidence of inflammation. The

theory is advanced by Dr. Sutton that gangrene was due to embolism of mesenteric arteries. The emboli being derived from a large varix just below Poupart's ligament and connected with the femoral vein.

Case II. Double salpingo-oöphorectomy. Diagnosis: Gonorrhœal salpingitis. Admitted to Allegheny General Hospital, March 5, 1892. Awaiting operation on Dr. Sutton's arrival. Miss O., aged 19. Domestic; family history negative. Personal history: First menstruated at thirteen. Had an attack of gonorrhœa four weeks previous to admission to the hospital. Examination revealed tenderness over both tubes with some enlargement.

Operation March 26 at 10 A. M. Incision about two inches in length. Tubes and ovaries on both sides found enlarged and congested. Slight adhesions. Both removed. No flushing or sponging of cavity. Wound closed with silk-worm-gut. Time of operation, twenty minutes.

Neither temperature nor pulse ever went above 100. Three stitch-abscesses formed during convalescence, but yielded readily to treatment. Patient left her bed on twenty-first day in good condition.

Case III.— Herniotomy. Diagnosis: Ventral hernia. Admitted to Allegheny General Hospital, March 12, 1892. Mary D., aged 27. Married. Domestic. Family history negative.

Personal history:—According to her own statement, had right ovary and tube removed, with nine inches of intestine, in Philadelphia, in the spring of '89, and in '91 at the same place, had been operated on for hernia, result of first operation. Latter operation was unsuccessful.

Examination revealed protrusions of intestine at various points on the abdomen. The patient extremely fat and flabby. Fasciæ atrophied and retracted.

March 26, 11 A. M. Abdomen including peritoneum laid open. Edges of retracted fascia secured with buried silk-worm-gut sutures. Superficial tissue closed with continuous silk-worm-gut suture. Wound healed by first intention, patient discharged on 21st day. Buried sutures afterward suppurated, yielded to bichloride irrigation, and the wound is now in good condition. The hernia at the point operated upon, is entirely reduced—a large protrusion still exists, however, above the point operated upon, which it is the intention of the operator to attempt to close at a subsequent operation.

Case IV.—Double salpingo-oöphorectomy. Diagnosis: Double gonorrhœal pyosalpinx. Admitted to Allegheny General Hospital, March 28, 1892. Operated March 26th, at 10 A. M. Incision about two inches in length. Tubes and ovaries on both sides found enlarged and congested. Slight adhesions. Both removed. No flushing or sponging of cavity. Wound closed with silk-worm gut. Time of operation, twenty minutes.

Operation March 30, 1892, at 2 P. M. After the abdomen was opened the greatest difficulty was experienced in loosening adhesions sufficiently to expose the uterus. This was finally accomplished. The adhesions were excessively dense and the hæmorrhage following their separation profuse. The right tube and ovary were removed first; they were embedded in a solid mass of adhesions which were so firm that they could scarcely be torn apart. After the greatest difficulty they were torn off. A similar condition was found to exist on the left side, but the adhesions if anything were more dense. The ovary was removed and what appeared to be the remains of the tube. Hæmorrhage was very severe but was finally controlled. A drainage tube was inserted and the abdomen flushed and closed. Time of operation forty-five minutes. At midnight temperature was 99°, pulse 104. The drain tube was exhausted at 8 P. M., and f℥iss bloody water removed. Temperature next morning was normal, pulse 108. Tube being empty was removed at 3 P. M. Pulse same evening 108, temperature 99⅘.° About this time the patient became maniacally hysterical. Tossed and fumed, sang ridiculous jargon, etc. Her abdomen became distended, vomiting set in, and after two days of raving which finally became true delirium she became exhausted and died. Temperature at highest point was 100⅘ °F.

The post-mortem revealed a violent peritonitis with small quantity of pus in the pelvis. Died April 2, 4.30 P. M.

Case V. Double oöphorectomy and anterior fixation of uterus. Diagnosis: Procidentia uteri, prolapsed ovaries with chronic ovaritis and salpingitis. Mrs. D., aged 26, married. Admitted to the hospital sometime during February and awaiting operation at time the operator

came on duty (March 26,'92.) Family history, negative. Personal history.—Gave birth to one child which was "still born" probably from the use of instruments. Her pelvis was found to be badly deformed (kypho-scoliosis). At the delivery of this child the cervix and perineum were both severely lacerated. The latter into the rectum. She had as a result procidentia, and coccyodynia with frightful erosion of uterus. An operation was done by a member of the hospital staff who succeeded in closing the perineum. This operation did not affect the procidentia, however, which returned, the uterus again becoming eroded. Treatment with pessaries was tried but only increased the discomfort.

On examination March 36, the ovaries were found prolapsed and tender and a laparotomy was consequently determined upon.

Operation March 31. Ovaries and tubes found enlarged and congested and removed. Uterus fixed to lower angle of abdominal wound by two buried silk sutures. Wound closed with silk. Temperature rose to 101⅘° on fourth day; also an erratic rise on fifteenth day to 103⅗°. Pulse, however, never went above 100. Some stitch abscesses formed and buried sutures came to surface and were removed. Left the hospital May 26 completely cured and in perfect health.

Case VI. Double oöphorectomy. Diagnosis: Chronic salpingitis, ovaritis and pelvic peritonitis. Mrs. P.; aged 29, married. Family history: One aunt died of pelvic cancer. Operation April 26. Tubes and ovaries on both sides enlarged. Looked somewhat suspicious of malignancy. Time of operation 55 minutes. Recovered, convalescence uninterrupted.

Case VII. Ovariotomy. Diagnosis: Multilocular cyst of right ovary. Left ovary diseased. Admitted to Allegheny General Hospital, May 3rd, 1892. Miss M., aged 20. Family history. Patient, a sister of Mrs. P.; operation May 6. Small cyst of right ovary, left ovary cystic. Time of operation 20 minutes Recovered, convalescence uneventful.

Case VIII. Oöphorectomy. Diagnosis: Multilocular cyst. Admitted to hospital May 5. Mrs. W., age 45. No history. Sixteen pound multilocular cyst, pedicle five inches broad and tied in sections. Recovered, convalescence uneventful.

Case IX. Double oöphorectomy. Diagnosis: Chronic ovaritis. Admitted to hospital May 6. Mrs. C. aged 26. No children. Operation May 7. Ovaries as large as a hen's egg. Both removed. Sat up on twelfth day, left hospital on 19th day.

Case X. Double salpingo-oöphorectomy. Diagnosis: Chronic salpingitis and ovaritis. Admitted to hospital May 24, 1892. Miss H, aged 29. Operation for lacerated perineum and cervix performed in spring of 1890. No relief. Operation May 28, both ovaries cystic and large and both tubes inflamed. Highest temperature 100⅘°. Pulse 90. Recovered. Sat up on 14th day, uneventful convalescence.

Other reports will follow from time to time.

ARISTOL AND EUROPHEN.

By DR. A. EICHLER,

PHYSICIAN TO ST. JOSEPH'S HOSPITAL, SAN FRANCISCO, CAL.

When antiseptic methods were first introduced to the notice of the medical profession, there was but little choice among the agents useful to secure complete antisepsis. Carbolic acid and iodoform were about the only ones in extensive use; objections regarding their toxic faculties and still more regarding their odor were barely considered, although often mentioned. Since progressive chemists, however, have furnished us with almost countless other antiseptic agents, and since carbolic acid has been largely superseded by the bichloride of mercury, those objections, which, as already stated, were hardly noticed in former days, have continually grown in magnitude and are now viewed with such seriousness, that the antiseptic which now wants to achieve distinction and success, must satisfy us not only regarding its antiseptic virtue, but also regarding odor and innocuousness.

As iodoform may be called principally an iodine compound, and as its germicidal action practically rests upon the iodine, it was but natural that chemists should, above all, try to form other compounds of iodine, which should possess the advantages of iodoform without its disagreeable features. They succeeded in giving us quite a number of such compounds, which,

however, never rose to the popularity of their congener. The first compound succeeding in a larger measure than all others previously offered was aristol, which was first presented about two years ago. It is composed of iodine and thymol; chemically speaking, it is a di-thymol-di-iodide, obtained in the form of a brownish red precipitate by treatment a solution of iodine and iodide of potassium with an aqueous solution of thymol and caustic soda. Aristol is insoluble in water or glycerine; in alcohol it is almost insoluble, while in ether or chloroform it dissolves very readily. If alcohol is added to an ethereal solution, aristol will be precipitated. It is also very soluble in fatty oils. Olive or almond oil are the oils most commonly used for this purpose. Oily solutions should never be made by heat, as this would produce chemical changes. In its dry state aristol is of a brick red color, which it also imparts to solutions. It decomposes on exposure to heat or light; this decomposition may be readily recognized by the change in color. It should always be kept in a cool place in colored bottles, amber color to be preferred. Its odor is but slight and not at all disagreeable. It adheres readily to the skin, thus adapting it for application in powder form. It is not toxic, and is in this respect decidedly superior to iodoform. If it was toxic, iodine could be detected in the urine of patients to whom it was applied; repeated examinations, however, by means of the starch test, have given negative results. In cases, where iodoform, having produced constitutional disturbances, was replaced by aristol, no unpleasant effects were noticed. Aristol can thus be safely applied to large surfaces.

In practice aristol has been found very useful in diseases of the skin, in which it proves quite effective without producing stains; it is prescribed in much the same manner as iodoform. It may be applied in its pure state as a powder or its strength can be reduced by powdered starch; it can also be made into a paste with starch and it is thus shown, that aristol contains no free iodine and is a stable compound. As it is soluble in ether, it may be added to collodion in varying strength and then applied with a camels-hair brush. The usual strength of such applications is 1 part of aristol in 10 of the vehicle. For ointments, lanoline or petrolatum can be used as a base to contain from 5 to 20 per cent. of aristol. Suppositories, for rectal, vaginal or urethral disease contain usually from 1 to 5 grains of the active ingredient; heat must be avoided in their preparation. It should also be mentioned, that substances possessing strong chemical affinity for iodine and thus decomposing the compound, should not be combined with aristol.

Besides its successful employment in affections of the skin, aristol has also been much used in chronic ulcers, syphilitic lesions, in short in all those cases, where iodoform has been formerly prescribed internally it has been employed very little. Iodoform, however, has also never been found efficacious when internally given.

When aristol was introduced it was also reported that similar compounds might be obtained by replacing the thymol with resorcin or salicylic acid; neither of these combinations have ever been presented in commerce. Instead of them another rival has arisen, in which a cresolate is substituted for the thymol, its commercial name being europhen; this is a typical example of what modern chemistry can accomplish in the nature of antiseptic compounds. It is formed by the action of iodine on isobutylorthocresol, in presence of alkalies. It exists as a fine amorphous, yellow powder, insoluble in water, but very readily so in alcohol, ether, chloroform or fatty oils, the latter taking up almost 25 per cent. Its percentage of iodine in combination is almost 28 per cent. It is more adherent to the skin than iodoform; it is very bulky, so that a small amount by weight will cover quite a large surface, a fact which constitutes quite a saving in expense. It is supposed to be 5 times lighter than iodoform. Its odor is agreeable, actually quite aromatic. Its action is similar to iodoform, depending on the gradual liberation of minimal quantities of iodine. While europhen is a definite chemical compound in its dry state, it begins in presence of moisture at a degree of heat equal to body heat, to liberate iodine, on which its antiseptic action depends; as this process proceeds gradually and as the iodine combines with the albuminoid constitutents of the body, thus rendering absorption very slow, it is almost innocuous. When alkalies are present, the liberation of free iodine is accelerated. Its solubility in oil allows its application in hypodermic medication.

As europhen is thus like iodoform in its physical properties it is only to be expected that their therapeutic indications should be similar also. Owing to its comparative recent introduction, reports regarding its activity are rather few, those published so far, however, show that the remedy may be confidently prescribed.

One of its chief applications, if it is supposed to supersede iodoform must necessarily be to venereal diseases. In contradistinction to other similar agents europhen has proved quite satisfactory. In soft chancre it promotes healing rapidly; as it is especially in this affection that patients object to the odor of iodoform it is quite probable that europhen will be universally adopted as the remedy. An ointment containing europhen 15 grs. to vaseline or lanoline ½ oz will be an application of suitable strength. It may also be used as an internal remedy in constitutional syphilis, instead of other iodine preparations and it can also be injected hypodermically for this purpose. One should then begin with a very small dose, ⅛ of a grain and increase slowly to 1 or 2 grains; when the dose is increased too rapidly iodism in its usual form may manifest itself. For the various syphilitic eruptions it can be applied in the form of an ointment.

In cases of non-syphilitic affections of the skin, especially the parasitic varieties, it has not proved itself a very active agent. Erysipelas, in its milder forms, is often very much benefited by applications of an europhen ointment of moderate strength. In burns and scalds europhen proves itself an excellent topical remedy. It relieves the pain almost instantaneously, stimulates granulations and leads to the formation of an elastic and firm cicatrix.

It should be applied in ointment form, of about 3 to 5 per cent. strength, with either a vaseline or lanoline base. Another, also very effectual mode of applying it is to first cover the surface of the burn with europhen and then with a 2 per cent. solution in oil; the part affected should be then wrapped in sterilized gauze, which is to be completely saturated with the europhen oil; a piece of oiled silk should be laid over this and fixed permanently, with either a roller-bandage, adhesive strips or a water glass dressing, according to the extent and location of the burn. This makes an ideal dressing, which will not require to be changed often and under which exuberant granulations will be promoted. At the same time, as the oily dressing will not adhere to the wound, there is no danger of tearing off the granulations whenever the wound is dressed, and thus delay healing. Quite severe burns heal by this method in a very short time.

Europhen also is of great service in chronic diseases of the nasal air passages, be they caused by hypertrophy or atrophy. It can be readily applied by a powder atomizer, either alone or in combination with inert dry powders.

In urethral surgery it can be used much like iodoform; gelatine bougies may be impregnated with it.

Europhen is especially indicated in such cases, where a stimulant effect and granulations are desired; in the treatment of chronic ulcers, especially of the indolent order, it will probably be still more used than iodoform has been. Fistulous tracts can, when an operation is not desirable be injected with an ethereal or oily solution thereof and thus be healed.

Considering all, we now possess in aristol and especially in europhen two antiseptic agents, which will answer to all demands heretofore of iodoform. They are somewhat less stable than iodoform, as far as the influence of light is concerned; but this is no serious objection: in antiseptic value they are fully equal to iodoform, equally non-irritating, more agreeable and less toxic, on account of slower absorption. They are useful in all affections where a remedy is required to prevent decomposition and destroy the bacteria of disease.

UMBILICAL VEGETATIONS.

In the treatment of umbilical vegetations, Sevestre (*Rev. Génér. de Clin. et de Therap.*, April 20, 1892) recommends: 1. Every morning the vegetations are covered with tannin finely powdered, this being introduced into all the furrows of the growth by means of a stilette. 2. Apply a padding and a small bandage. 3. On the following days, the crust is removed, a warm bath given, and the application renewed. This treatment is to be continued until a cure is obtained, which generally takes place in the course of 2 weeks at most.

A CASE OF AN OLD RIGHT INGUINAL HERNIA, IRREDUCIBLE; OPERATION FOR SAME.

By JNO. B. CRANDALL, M. D.,
STERLING, ILL.

E. J. H., American, age 74 years; married; occupation, proprietor of a livery stable. Have known Mr. H., for the last twenty years; he has always enjoyed good health with the exception of an epithelium cancer of the right cheek, which was removed some eight years since. Some four years later he had a deep abscess under pectoral muscles, which was treated by deep incision and syringed out with a solution of permanganate of potash.

The patient had been troubled with an old inguinal hernia for years and wore a Hubbard truss. Some four or five years ago I gave him chloroform, and with the assistance of Dr. Keifer we had no trouble in reducing the tumor which was then in the scrotum, by taxis. Has had more or less stomach trouble for the last few years, which has been amenable to treatment.

May 15, 1892, was called just after dinner at 1 o'clock. I found a loop of the ileum in the inguinal canal. He said that he felt something give way in the morning as he was making some exertion to drive some fowls from his dooryard. He was extremely nervous. Dr. Keifer assisted me in attempting to reduce the hernia as before, by taxis. We put him fully under the influence of chloroform and tried all positions and conservative methods with no successful results. We then tried the local application of ether over the seat of the tumor for an hour or more with no success. All of our conservative methods failed to relieve him. After explaining the situation to him and his wife, with their consent we called in extra assistants at 4 P. M., and after rendering all of the instruments and dressings microbe proof, we put him again under the influence of chloroform; cut down upon and pulled out the intestine; removed some old omental adhesions; applied some aseptic wash to the strangulated parts until they appeared to be in a natural state, we then enlarged the abdominal opening and replaced the intestine in the natural bed within the cavity, and closed the wound with a double set of juniper cat-gut sutures; cut short the deep sutures and left them buried. We had no trouble from hæmorrhage. The operation lasted some three-quarters of an hour. We dusted iodoform over the wound and applied iodoform gauze and the ordinary retaining bandage. We then placed the patient in a clean bed, and in a short time he came out from under the influence of the anæsthetic, but had more or less nausea. The operation was performed at four o'clock P. M., three hours after first seeing the case. At ten P. M., we gave him a small hypodermic injection of morphine, which quieted him down for the night. For the next three days we kept him in a passive state, feeding him light broths and to quench thirst, which was not excessive, we gave him Apollinaris water. He felt no pain at the seat of operation but was troubled with nausea, and would eject most of the articles taken into the stomach, and, at times mostly clear bile. This we attributed to the fact that just before the operation he took unknown to us a dose of cathartic pills.

Our next move was to get a natural movement of the bowels. We gave him a solution of epsom salts with the different mineral waters, which were retained for some time, but did not act upon the bowels. We then gave him injections of different mixtures and succeeded in getting a passable movement from the bowels after giving a copious injection of ox gall. The pulse did not run over ninety per minute, and the temperature was normal. He could retain nourishment longer, and the wound gave him no trouble. Ten days after the operation we looked for a speedy recovery, as the incision had healed by first intention. But at the end of the two weeks the stomach symptoms reappeared; he complained of a burning sensation upon taking any fluid. Up to this time there had been no apparent tympanites; all of the pain was located in the stomach. He could not retain food. We tried enemas of beef tea, in order to nourish him by the rectum.

During the last week there was more or less gaseous distension of the stomach and the upper part of small intestines. We were unable to get any further movements of the bowels or keep any amount of nourishment in his stomach for any length of time. He had no fæcal vomit at any time during his sickness. He lingered along in the same way. During the last week we

gave him a hypodermic injection of morphine ⅛ gr. at night, which gave him tolerable rest. He died upon the twenty-first day following the operation.

No post-mortem was allowed.

As to the cause for the persistent stomach trouble, we attributed it to the action of the corroding influence of the bile products open the mucous coating of the stomach, developing latent cancerous lesion; or else to an invagination of the lower part of ileum; or from some bands of plastic material encircling the seat of original stricture. Knowing the patient to be of a cancerous diathesis, we have reason to attribute the stomach trouble to that cause.

OLEUM TEREBINTHINÆ AS A REMEDY FOR CROUP, WITH A REPORT OF FIFTEEN CASES; WITH DISCUSSION.*

By E. W. KELLOGG, M. D.,

MILWAUKEE, WIS.

In consideration of this subject, I wish at the outset to disclaim any originality in suggestion or application of the remedy. I have simply followed the suggestion of others and recorded the results.

Turpentine is an old and well known remedy, and yet, little if any used in croup until within the past two years. It was first suggested by Prof. George in 1886. As it has but a limited internal use, I may perhaps be pardoned for giving some of its physiological actions, as detailed in therapeutical works. It is a stimulant diuretic, antiseptic and expectorant. It arrests fermentation and putrefaction, and is very destructive to all forms of bacteria.

It diffuses into the circulation with great rapidity and is quickly recognized in the breath, sweat and urine.

It is secreted by the skin, kidneys, lungs, bronchial tubes and probably in some measure by the mucous membrane of the trachea and larynx.

The bronchial secretions are considerably increased. Its effect in croup is doubtless due to its local action upon the respiratory tract during its elimination from the system.

*Read before the Milwaukee Medical Society, May 10, 1882.

I am well aware that the diagnosis of any or all of these cases may be called in question and for that reason have omitted two cases in which diagnosis was doubtful. I do not care to be classed among those who see diphtheria or diphtheritic croup in every case in which there is a more or less extensive deposit upon the tonsils, pharynx, nasal surfaces, or larynx; but I do believe in a specific contagious disease called diphtheria, and believe that the majority of cases of so called membraneous croup are in reality diphtheria and should be treated and guarded against as such.

Whatever may flourish in other parts of the city, however much follicular pharyngitis may pass for diphtheria in cleanly houses and among people who observe the most ordinary rules of hygiene, the disease with which we have to deal among the lower classes of foreign population is more than pharyngitis and malignant sore throat. It is a disease that kills by the score as the grim health-office reports will show.

It thrives in uncleanly houses as vermin do and is more common among the lower classes of European immigrants packed in filthy tenements than it is generally supposed to be.

Among these people there are many cases to which no physician is ever called, and these are the invisible causes of many more severe cases of pharyngeal and laryngeal diphtheria.

The ætiology and pathology of croup is shrouded in obscurity both in theory and practice. Until 1858 when diphtheria was prevalent in England, the word croup was confined to an acute disease of the larynx believed to be non-contagious, but much has been done in the past two years towards proving its true cause and rational treatment. Recent investigations tend to show that the cases formerly described as true or membraneous croup were in reality laryngeal diphtheria or in other words, the difference is one of locality and not of exciting cause.

In the majority of these cases membrane was visible in the throat for several days before there were any laryngeal symptoms.

Case I.—The first case was a Polish child two years of age. Had diphtheria for four days when croup developed and she grew rapidly worse.

About forty-eight hours after the laryn-

geal symptoms began Dr. Walbridge was called in consultation. The child was cyanotic. The sternum was strongly retracted with each inspiration.

We informed the father that the only hope for the child was in tracheotomy, and that this would be but a possibility.

He refused to have tracheotomy performed and Dr. Walbridge proposed to try ol. terebinthinæ as an experiment, relating a successful case in which he had previously used it with Dr. Schiller. The child was put on drachm doses every four hours and on the following morning was visibly improved though the laryngeal breathing and crowing cough were still marked. On the following day she was still better and in three days the symptoms of croup had entirely disappeared.

The child remained weak and anæmic for a long time but finally made a complete recovery.

Case II.—German boy four years of age. One of four cases of diphtheria in one room. He developed croup on the fourth or fifth day. His pharynx and nose were filled with false membrane. He with the others had been taking corrosive sublimate and iron in alternate doses. This was continued and in addition ol. terebinthinæ in teaspoonful doses every 2 hours. The cough was easier after a few doses. The retraction of the sternum disappeared. Inspiration became normal and he made a complete recovery.

Case III.—A German girl ten months of age. When first seen she had no visible false membrane. She was in the third stage of croup; cyanotic, greatly depressed. She was given brandy and ol. terebinth. in alternate hourly doses. She died in twelve hours.

Case IV.—A Norwegian boy five years old. Had an attack of diphtheria. Membrane was confined to tonsils and pharynx with a small patch at one corner of the mouth. Developed croup on the second day. Characteristic cough and inspiration. Was gixen oleum terebinth. in drachm doses every 2 hours for four days and nights.

The effects of the drug in this case were especially prompt and efficient. Although the laryngeal symptoms were continuous and severe the effects of each dose could be seen in slower, easier respiration, and a stronger pulse. He made a complete recovery.

Case V.—A Polish child four years of age. Had been under the care of another physician for a week when croup developed. A sister died in the same condition the day before. I saw him. When first seen his respiration was very difficult the sternum falling two inches with each inspiration. He was given drachm doses of oleum terebinthinæ every hour for six hours, then drachm doses every two hours. The following day he complained of some stranguary and the turpentine was given every three hours instead of every two. The stranguary disappeared during the day, and on the following day he was so much improved that the family discharged the doctor. He was on the street three weeks later.

Cases VI and VII.—Polish girls. Two of five cases of diphtheria in one room. The treatment was not carried out. Five successive physicians were called in four days and four of the five cases died including the two with diphtheritic croup.

Case VIII.—German girl four years of age. In the third stage of croup. No membrane was visible. Had only been sick twelve hours. Teaspoonful doses were given every two hours alternating with brandy but there was no agreeable effect and she died within four hours, from suffocation. There was no visible sign of diphtheritic membrane in this case.

Case IX.—Three days later was called to see a brother three years of age and found his throat filled with membrane. Four days later it reached the larynx. He was put upon the same treatment and took eight ounces of turpentine during the next few days. Slowly but steadily all symptoms of croup disappeared and he made a complete recovery.

Case X.—German boy six years of age. Diphtheria followed by croup. He was given drachm doses every two hours for nearly forty-eight hours, but there was no effect. He grew steadily worse and died from suffocation.

Case XI.—A Polish girl two years of age. Four children in the house had diphtheria and her throat was covered with false membrane. When first seen she was breathing with the greatest difficulty, and with each inspiration the sternum was retracted enough to make a hollow the size of a man's fist. The parents positively refused to have further medical attendance as she was expected to die, but they

promised to keep up drachm doses of turpentine every two hours. For four days and nights they gave her a teaspoonful every two hours. She made a slow recovery.

Case XII.—A Polish boy four years old. One sister with diphtheria followed by croup had died within a week. Every inspiration could be heard in any part of the house or out on the walk. His face was cyanotic and his extremities cold. He was given drachm doses every hour during the day and every two hours at night. He grew no worse but the improvement was but slight for two days when he began to improve and made a rapid recovery.

Case XIII.—Was an Irish girl four years of age. Treatment began about twelve hours after laryngeal symptoms developed and was steadily kept up for twenty-four hours but with no benefit. She died from exhaustion.

Case XIV.—German boy two years old. Diphtheria for six days followed by croup. Drachm doses were begun early and given regularly but there was no visible effect. He died in about forty hours.

Case XV.—Polish child one year old. Diphtheria followed by croup. Strong retraction of the sternum, crowing cough, and difficult respiration. He was given half drachm doses every two hours and improved from the beginning. The laryngeal symptoms disappeared in three days and he recovered.

To recapitulate. Of the fifteen cases, eight recovered and seven died. In all of the eight recoveries croup was the sequel of diphtheria of the pharynx.

Of the seven fatal cases two were not given the treatment, in two others there was no visible diphtheritic membrane, in the three remaining fatal cases, croup was the sequel of diphtheria of the pharynx

In but one case was there any disagreeable effect from the remedy, and that was a temporary stranguary when 15 drachms were given in 24 hours to a boy four years of age.

In all cases it was given in milk.

In no case was it rejected after it was once past the epiglottis.

It must be remembered that they were cases of a disease of which ninety per cent. die.

DISCUSSION.

Dr. French: I am very glad that a remedy has been found that will hit what is termed diphtheritic croup, because I have generally bid such cases good-bye as soon as I have heard that crowing cough. I would like to ask in respect to the use of this turpentine, have you given a whole teaspoonful to a child a year old?

Dr. Kellogg: Yes, sir.

Dr. French: Did it have any effect on the bowels?

Dr. Kellogg: No, sir.

Dr. French: It is hard work to give six drops to an adult and have them keep it down. I would like to ask another thing: What effect has it upon the other membranes outside of the larynx?

Dr. Kellogg: I could not see any effect.

Dr. French: Hence it would seem to me that it is somewhat peculiar in its action. It would seem that if it had an action in stopping the formation of a membrane of the larynx or stopping the swelling of the larynx, at least that it should produce the self-same effect on the other membranes; but Dr. Kellogg, do you think that all cases of croup that come under your hands are diphtheritic, don't you believe that there is such a thing as a true membraneous croup from a catarrhal difficulty?

Dr. Kellogg: There may be, but I believe the majority of them are diphtheritic.

Dr. Walbridge: I only want to ask one question. I don't know whether I understood the doctor properly in reference to two of his cases that are included in those fifteen. As I understood him in the recapitulation, in two cases the treatment was not carried out.

Dr. Kellogg: Yes, sir.

Dr. Walbridge: Then it seems to me that a report of thirteen cases would be much more appropriate and much more accurate, and that would make the statistics very much better; and in fact I do not think those two cases belong with the cases treated by the method suggested.

Dr. Kellogg: The children only took two doses. Dr. Walbridge saw that first case with me. I would like his substantiation of the child's condition.

Dr. Walbridge: Certainly if there ever was a case that looked as though an opening must be made somewhere, either through this membrane or below it to give the child a chance to breathe that was one. The time was very short when that must be done. The retraction of the sternum was very marked and the expiration was

as difficult as inspiration, and as the doctor remarked in relating the case, it seemed as though nothing except intubation or tracheotomy would be of any avail; but having seen a case with Dr. Schiller in which he suggested that we try the turpentine before adopting surgical means, I concluded that that was the last hope, as any surgical operation was not admitted in this case.

Dr. Hayes: I feel very glad to hear that some remedy is found that will help those cases. Some years ago I had some experience in this line; I never saw a case of diphtheritic croup that recovered; I have performed ten cases of tracheotomy and every one of them has died; I have used intubation and corrosive sublimate and never saw a case recover; neither have I heard of any case in the county in which I had practiced and where diphtheritic sore throat was prevalent. I never heard of a case that recovered with an operation in my own or any one's practice. So I am glad to hear that a remedy has been found that will offer some hope of recovery in those cases. Certainly it is a desperate condition, and my experience has been very discouraging.

Dr. Shimonek: I would like to ask the doctor to state what effect turpentine had on the membrane itself?

Dr. Kellogg: It came off in a dissolved condition.

Dr. Shimonek: I have had quite a little experience with tracheotomy and with intubation, but I am sorry to say the patients are all dead. I have had six intubations since I have been in the city and every one of the patients died; I have had seven or eight tracheotomies, but every one of the patients is dead; I have had quite a number where I used turpentine and every one died but one, and that one died from complication. The child expectorated the membrane whole, forming a complete cast of the trachea; the membrane was not reproduced, but there was an immense expectoration of purulent and very offensive matter; the child was thirteen years of age and died. I have used bi-chloride until the gums have become sore and in some cases bloody diarrhœa ensued; with no effect on the membrane.

Dr. Walbridge: Please tell us the dose and frequency of it that you employed.

Dr. Shimonek: One teaspoonful not oftener than every four hours.

Dr. Walbridge: I believe the secret is to give enough turpentine.

Dr. Burgess: Would you give the common turpentine of Merck's?

Dr. Walbridge: Merck's is the best.

Dr. Wurdemann: If my question is in order, I would like some explanation of the term croup. To what are we to apply it; is it a symptom or a disease? It seems to me I have seen some cases of simple laryngitis in children in which there are unmistakable croupy symptoms, that is to say stridulous breathing. Can we not have croup in simple laryngitis?

Dr. Kellogg: I do not intend to bring forward a cure-all for croup. I know it is a terrible disease, and I have made a practice until we gave this first child turpentine, if I found a child with strong contraction of the sternum, crowing cough and difficult respiration, to tell the family I could not do any more for the child; and I never had a single case, I think, when I was sorry I made that prognosis; but I believe that if enough turpentine is given, that there are cases in which it is of immense benefit. I believe I have sat and watched children die that might have been saved if I had given them enough of the drug; and it does not pay to give it for a few hours and then stop, but give it in large doses and give it continually. In one of those cases I went every morning and expected to find the boy dead when I got there; you could hear his respiration plainly outside of the house, a long drawn inspiration; he was cyanotic, his extremities (both hands and feet) were cold; his heart was weak; but he was kept on turpentine for between three and four days before there was very much benefit, and then he made a rapid recovery. The membrane came off in flakes, mixed with saliva and foam.

Dr. French: I have performed tracheotomy and I have performed intubation. I did have one case recover of intubation, a girl of 14; and she got nothing internally but the old mixture of iron and potash. The formation of the membrane seemed to stop as soon as intubation was introduced and never returned; I never saw the membrane afterwards; previous to that, however, I could pick it out of the larynx with the laryngeal mirror; but it formed so fast that I saw it was no use in bothering any longer and I therefore performed intubation.

Society Reports.

STATED MEETING OF THE MEDICO-CHIRURGICAL SOCIETY OF LOUISVILLE.

Stated meeting May 27th, 1892.

The President, Dr. Wm. Cheatham, in the Chair.

DISTURBANCE OF CIRCULATION TREATED WITH STRYCHNINE.

Dr. Turner Anderson:—I wish to call your attention to this patient. He is a teamster and has been doing a good deal of hard work for the last two years or more. The point I want to call especial attention to is the irregularity in the circulation. His health all the time has been quite good; there has been no apparent disturbance of the heart, but recently he has been suffering very much from headache. I thought that possibly the trouble might be central in the brain, but an ophthalmoscopic examination by Dr. J. M. Ray reveals no evidence of a brain lesion, and I have not been able to detect any lesion of the heart. The patient states that he does not use tobacco to excess, smokes probably two or three cigars per week, does not chew at all. Drinks largely of coffee. The very marked disturbance in the circulation has been present for about two months. The only treatment has been strychnia in one-sixtieth grain doses three times per day.

PULSATING TUMOR.

Case No. 2—This little girl about five years ago was struck a blow upon the cheek with a hickory stick, which was followed by a great deal of contusion. I did not see the case at the time. After the swelling, contusion, etc. had passed off it left this pulsating tumor. When I first saw the case about a year ago, I could stop the pulsation of the tumor by pressing the finger upon the blood vessel. There seems to be no change in the form or size of the tumor since the patient first came under my observation, except possibly it is a little larger.

ACQUIRED HYDROCEPHALUS.

Case No. 3—The next case I want to show you is a case of acquired hydrocephalus. This case shows that troubles in families never come singly. A little girl in the family sustained a fracture of the lower extremity of the humerus, then about four weeks ago at the time I was called to attend the case of fracture, this child (the case presented) who had always been perfectly healthy, developed symptoms of cerebral disease, began vomiting, constipation, crying, etc., and the vomiting has continued. The cause of the trouble is intracranial effusion, and is simply a result of meningitis that is chronic in character and comes under that head which would be considered acquired hydrocephalus. I have watched the progress of the case, and it is one of considerable interest to me.

LACERATED CERVIX.

Case No. 4—The next case I will show you is a woman upon whom I operated on the tenth of April last for lacerated cervix. The history of the case is that she was married in November, 1890; about six or seven months later she had premature labor—a very serious, hard labor—and did not get up afterward with any degree of satisfaction. In a short time she was able to be about the house, but did not regain her health. Four months after the miscarriage, laceration of the cervix was diagnosticated and an operation performed by her attending physician for its relief, which however was unsuccessful. She then took to her bed three weeks after that and remained in bed from that time until the tenth of April when I performed this operation for laceration of the cervix. It was a unilateral laceration and there was a great deal cicatrical tissue shown in the angle of the tear; her symptoms were of the gravest kind. She suffered from serious reflex symptoms, among others great disturbance of respiration. She had suffered so much from disturbed circulation, respiration, and was so greatly depressed that a profound impression was being made upon the nervous system, and she was losing her memory; it was thought that she was losing her mind. She was greatly depressed, not being able to get out of bed at all; had to be carried from bed and placed upon the table for operation. Dr. Roberts was kind enough to come in and look at the operation, and Dr. Pierce administered the anæsthetic. Four silver wire sutures were used and one silk-worm gut. The silver wires were allowed to remain in for three weeks.

The union is solid and everything is as perfect as it could possibly be, gradually one symptom after another having passed off. She has gained very much in flesh, and can now walk about without any trouble. Before the operation there was great difficulty in her co-ordinating powers. Menstruation has been restored, she has now passed one period satisfactorily. The only symptom remaining is a little unsteadiness in her walk, which you will notice.

MYOSITIS OSSIFICANS.

Dr. A. H. Vance: This patient I saw for the first time yesterday. It is a very rare case, and one of a great deal of interest. I take it that it is a genuine case of myositis ossificans; the girl is now seventeen years of age; had acute pain in the muscular system, commencing when she was quite young. I find the ossific change has occurred in the following muscles: Quadriceps extensor, left thigh; biceps and triceps, right arm; both pectoral groups; both latissimus dorsi and the vertical muscles of the back. There is also a bony growth of ossified muscles about the larynx. I have only seen one other case of this kind, and the ossification in that was not nearly so extensive as this. I told this patient if she would come here and allow us to examine her, that we would consult together and try to devise some treatment, either surgical or otherwise to benefit her.

DISCUSSION.

Dr. Wm. Bailey: From the casual examination I gave the young man presented by Dr. Anderson, the heart does not reveal any valvular lesion whatever. I believe the trouble is cerebral. Such conditions occasionally arise from the use of tobacco, but I doubt if his use has been sufficient to cause it. I believe there is no history of rheumatism or endocarditis, and I think the trouble is of nervous origin.

Dr. D. T. Smith: I quite agree with Dr. Bailey as to the nervous origin, but am inclined to doubt that it is central in the cerebro-spinal system. I think that the case will go on gradually to a fatal termination.

Dr. W. O. Roberts: Referring to the case exhibited by Dr. Anderson, the little girl with tumor on the side of her face: We, of course, all recognize this as aneurism; aneurism involving some of the branches of the anterior temporal artery. It is the second case of the kind I have ever seen, the first being that of a railroad engineer who had his head bumped against the window of the cab. I do not remember just how long this case had been in existence before I saw it; pulsation, however, was not nearly so distinct as it is in the case presented by Dr. Anderson. I operated upon the man and he got well without any trouble. I think Dr. Anderson's case will have to be operated upon soon, or it will burst. The tissues over it are getting very thin.

Concerning the other case—that of lacerated cervix—I was fortunate enough to witness the operation, and the woman's condition is now very different from what it was when the operation was performed. At the time the operation was done, she was exceedingly nervous and hysterical. I have never seen such marked results follow an operation for laceration of the cervix. It was a very large tear, the tissues were greatly indurated. Dr. Anderson did the most thorough operation that I have ever seen; the parting of the edges and approximating of the lips of the wound were perfect. He followed the method of leaving the stitches in for a long time. I think a great many cases of failure in this operation are due to the fact that the stitches are removed too early. The best operators are now leaving them in two to three weeks. I think the result in this case is largely due to the length of time the stitches were allowed to remain in.

Dr. Turner Anderson: I will state that recent works on this subject advise that it is better to leave stitches in for at least three weeks. The last stitches are often taken out at the office of the doctor, the patient being sufficiently improved to come to his office. This case has shown excellent results all through, restoring the woman, who was bedridden for nine months, to the care of her house, to her home and friends.

Dr. E. R. Palmer: Referring to the case exhibited by Dr. Vance, I would suggest that the best thing for this woman to do would be to hire out to some circus and exhibit herself as "the ossified woman,"—that would be a phase of Gold cure that I could most heartily indorse. In my opinion no treatment either medical or surgical would be of any benefit.

Dr. W. O. Roberts: It is an exceedingly rare affection. I saw something on the subject not long ago in the *British Medical Journal*; also saw a case about two and a half months ago that presented conditions very much like this, excepting that none of the growths were movable. This condition appeared in both lower extremities and I think in one arm.

Dr. D. T. Smith: The case presented by Dr. Vance is certainly very interesting. In the lower animals we find this condition known as myositis ossificans is not very rare. The Clydesdale and other heavy horses of that character, frequently have bony growths in the muscles of the legs, and I think the cause is some misdirection of the forces in the relation between bone and muscle formation elements, that has not yet been traced up.

Dr. A. M. Vance: I would like to have somebody suggest some treatment, probably it would have to be surgical.

Dr. H. A. Cottell: I have a distinct recollection of attending a show some two years ago in Cincinnati, and among other things they exhibited what they called an ossified man; to all appearances every muscle in this man's voluntary system (leaving out the occular muscles) was in the condition I take it this woman's muscles will be if the process continues. It seems to me that a case of this kind is hopeless, unless we can arrest the progress.

Dr. J. G. Cecil: I would like to ask Dr. Vance the history of this case, that is, how fast it has progressed, etc.

Dr. A. M. Vance: I do not think you could get the correct history. About six months ago while pumping water she experienced pain in the right arm. I suppose some shifting of the muscles caused this and they date the hardening process from this time. The mother, however, says the trouble has existed for a number of years.

ACUTE ASCENDING MYELITIS.

Dr. J. B. Marvin: I will read a short history of a peculiar case, which history was prepared and handed me by a roommate of the patient:

"Mr. R. H. M., aged thirty-two years. After his fifteenth year, was a man of delicate health though he took extremely good care of himself, except that he was a constant drinker of whiskey, but not to excess. When he was about fifteen years of age he was thrown from a horse and sustained an injury which confined him to his bed for a number of weeks, and also caused partial paralysis of the lower extremities. He made a very good recovery from the injury, though co-ordination was never fully re-established. Ever since the injury was received he has at times complained of pains in the small of his back and hips.

About five years ago, an eczema, as he called it, appeared on his body, and, from scratching, he caused a lesion on his leg, which developed into a chronic ulcer, lasting two years and healing finally but with much trouble. Treatment for the ulcer I do not know.

He had had, according to his own statement, two attacks of gonorrhœa, the first five or six years ago; second while attending lectures here during 1891, from which he had not recovered at the time of his death. He came to this city February first, 1892, appearing to be in very good health and continuing so until three days before the final attack of paralysis. During these three days he complained of pain in the small of his back, and of soreness and stiffness of the muscles of his hips and legs with increased loss of co-ordination. On the night of the third day he had a paralytic attack, while asleep, of the lower extremities, and partial paralysis of the upper extremities, which gradually became complete, except sensation. He was able to move his toes for about two days, and could move his fingers for a little longer. He did not lose his speech until about ten hours before death. He lived four days after he was paralyzed. He died from loss of respiration.

His grandfather and two uncles died from paralysis, also one of his aunts. His father and mother are still living. His connections on mother's side were all stout, healthy people, though nearly all died from paralysis. None of his father's people died in that way. His father is a weakly man, and has a chronic sore leg.

I saw him in the morning with history that he had attended lectures the day before, but felt a little dizziness in going up the steps. That night he waked up and could not move his legs. The next morning early I saw him and he had perfect sensation, but loss of motion in both legs, and partial loss of motion in the muscles of the body; still he turned himself on his hips and moved his arms, though they did

not move as freely and easily as normal, it appeared to me. The paralysis rapidly extended, and he complained of a sense of oppression about the chest. His urine was passed normally. At first he had constant desire to pass the fæces, but later lost that feeling. The intellect was perfectly clear, and about all the pain he complained of was a heavy aching sensation about the back, which he thought was due to lying in bed in one position. This is about the history of the case. The paralysis rapidly extended involving the respiratory muscles, and causing death.

I succeeded in getting an autopsy, but was only allowed to take out the cord. Dr. Frank performed the autopsy. In the lower lumbar region the canal was very bloody, there were also under the membranes two or three segments looking like hæmorrhage. After several weeks hardening of the cord sections were made, which upon microscopical examination revealed evidences of meningitis, probably chronic and more recent diffuse myelitis.

This case seemed clinically to be one of Landry's paralysis, though the autopsy proved it to be a case of acute ascending myelitis, but myelitis that is central generally runs a different course from this and is attended with much more phenomena.

HEMIPLEGIA.

Dr. W. L. Rodman: I saw a case this afternoon in which I am in doubt as to the diagnosis, and would like to have some light thrown upon it. I saw the patient who is about fifty-nine years of age, with a physician of Jeffersonville, Ind., about six o'clock this evening, with the following history: A year ago last Febuary I saw the same gentleman two or three times during an attack of hemiplegia of the right side. The hemiplegia was rather complete, but he made a good recovery in the course of two or three months. He has been uninterruptedly well since that time, and it is now nearly a year and a half since he recovered from the attack of hemiplegia. Yesterday morning his wife left him in bed when she got up to go and see about the breakfast; in about half an hour he came into the dining room; she asked him how he was—said there was no particular reason for asking this as he was perfectly well the day before. He stood perfectly still and stared at her, and said that he thought he was going to die after she left him in their room. He was not able to walk, but his wife and daughter helped him to a chair and finally put him to bed. In a short time he had a convulsion which lasted about three minutes, shortly afterward he had a second convulsion; about eleven o'clock he had a very severe attack, it being the third, After this he became comatose, remaining perfectly unconscious for two or three hours. There have been no convulsions since; he could use both arms and both legs to-day perfectly well. He vomited all yesterday and last night; to-day he has not been able to retain anything on his stomach; until about noon when he drank a little mint water. The patient has been out of his head since the severe convulsion; he did not recognize me when I called, although I have known the man very well. He has no heart trouble, and there seemed to be no particular evidence of atheromatous degeneration in the blood vessels. There is no arcus. Left eye was slightly turned inward. Urine was passed freely, a sample of which I brought home and had an examination made, but no albumin was found. The patient had no fever; pulse was 140 per minute when first seen by his physician; it was 80 soft and regular when I saw him.

I would like to have an expression from the members of the Society as to the diagnosis—if there is a clot in his brain, where is it located?

Dr. Wm. Bailey: I have nothing especial except to say that I doubt about there being a clot, else I think from pressure there would have been paralysis somewhere. It may possibly have been simply meningitis. I saw mention made of this case in the daily paper, stating that he had been unusually taxed for days past. The paper gave the amount of work performed by him for the last few days. It would seem to me to be meningitis, notwithstanding there has been no variation of temperature. In Bright's disease we have a low temperature notwithstanding other conditions that would produce fever. Fever is not always an essential element in the symptomatology of inflammation; there may be counteracting influences which prevent the variation of temperature.

Dr. J. B. Marvin: It would seem to me that diagnosis would lie between one of two things. The first attack was probably embolus rather than clot. The sud-

denness with which recovery occurred and the completeness of the recovery would rather indicate to my mind a small embolus instead of clot. The second attack would seem to me to be cerebral congestion rather than meningitis. The suddenness of the attack would in my mind be against the idea of meningitis. I would not be satisfied with a single examination of the urine. Indications are strongly in favor of the kidneys being the seat of the trouble.

Dr. D. T. Smith: I perfectly agree with Dr. Marvin—of course we must all admit that we can only guess at the diagnosis in this case.

Dr. W. L. Rodman: The case is by no means clear to me. I do not agree with Dr. Bailey that it is in all probability meningitis; the attack was too sudden for anything of that kind. Furthermore, the history of the case makes it rather improbable for the attack to have been meningitis. I think the former attack was very likely due to a small clot rather than embolus. I believe that the present attack is either due to congestion as suggested by Dr. Marvin, or possibly to a clot not in the same situation as the former one, because it would produce paralysis, either of motion or sensation. Further examination of the urine will, of course, be made.

LAPAROTOMY.

Dr. A. M. Cartledge: I have a very interesting case to report, it being a little unusual in the way of ovarian trouble: On the fifteenth of March I was called to see a young married woman, twenty-five years of age with about the following history: Three days before that time her sister living in the country had married, and in preparations for the wedding, she (the patient) had done a great deal of work, lifting some very heavy vessels, and various other things. She had suffered from considerable pain in the left side of the pelvis, a bearing down sensation, ever since the wedding occurred. However she came to the city with the wedding party, was put up with some of her relatives, and one night in going down the steps of the stairs she was stricken with severe pain in the lower pelvic region, and was put to bed which was the occasion of my being called to see her. I found her in the greatest pain, all evidences of marked shock, etc. I was at a loss to ascertain the cause of it. Simply had to practice the expectant plan and gave her a little morphine. The next day found her more comfortable; I examined her at this time by the bi-manual method, but could detect nothing excepting that the pelvic structures seemed more or less indurated, and there was great tenderness. She finally became sufficiently well to go to her home in the country. When her menstrual period came on about the fourth or fifth of April, she had a repetition of all this suffering, only it lasted longer; for three or four days she had to be kept under the influence of opiates in order to get any relief. The pain now was principally in the left side. After this menstrual period, she was unable to move in bed, could not turn from one side to the other. I examined her very thoroughly this time and detected an induration to the left of the uterus rather high up. I concluded to treat her in bed and see if there would not be a decided improvemont in another month, or until the next period. This was done, and she was never able to sit up more then fifteen minutes without the pain becoming so severe that she would have to go back to bed. The menstrual period came again and it was simply a repetition of April, again she had to take the opiates in order to control the pain. After the menstrual period the early part of May you could detect by manipulation a hard induration in the left pelvis, there was also intense pain in that region. A laparotomy was performed at the Norton Infirmary about twelve days ago, and we found that the right ovary was entirely on the left side, behind the left ovary, very much swollen, twice the size of the left. Both the right and left tubes were very much enlarged and thickened, and a great deal of serum in the tubes; uterus was sunken and more or less retroverted, also very much engorged. Both appendages were removed. The patient has done well since the operation, sleeping better the first night without an opiate than she had with opiates for several months,

Dr. C. Skinner: I would like to ask Dr. Cartledge if there was any pus.

Dr. A. M. Cartledge: There was no pus. The tubes were very much enlarged, but, I took it, from mal-position.

Dr. C. Skinner: I am inclined to think that the elongation and displacement were caused by hydrosalpinx.

Dr. J. A. Larrabee: I simply rise to ask a question for information. It would seem that the displaced ovary gave rise to all the trouble. I want to ask the surgeon whether it would not have been proper, if it could have been done, to have replaced the ovary without removing it; that is, if that were the cause of the trouble, why would not relief have followed correction of the position of the ovary without its removal?

Dr. A. M. Cartledge: I will say in regard to Dr. Skinner's remark: It is very probable that there was some hydrosalpinx. The tubes were very large, and very long, and quite red in appearance. Probably hydrosalpinx had something to do with the trouble at the beginning. The question asked by Dr. Larabee would suggest itself: I did not think we were justified in doing a conservative operation, trying to replace the ovary on account of the apparent disease. The safest plan was to get rid of the appendages entirely.

SULPHONAL POISONING.

Dr. J. B. Marvin: I would like to ask for information: I saw a case a few days ago, a gentleman who had taken one afternoon and the following morning, in divided doses, two doses the first afternoon, and three the next morning, sleeping pretty well the first night, two-hundred and forty (240) grains of sulphonal. I know very little about this agent, have never given it in larger doses than twenty grains. This man went to sleep but he never woke up any more. I have been able to find out nothing about the toxic effects of this drug, nor the antidotes. I did not see the patient until some time after he had taken the last dose. Found him sleeping very heavily; pulse was normal and I said let him sleep and we will see what will be the result. I did not know at that time the enormous quantity he had taken. He had taken it on his own prescription, telling his wife that it was absolutely harmless, that he could take half an ounce at a dose. I found out afterwards that he had taken this dose. In the evening at six o'clock his pulse was under 100, respiration 32. I could not rouse him from the first, pupil responded readily to light. He would yawn and stretch himself like a man dead asleep, move his hands, lift his head up and turn himself in bed. I said to his wife that he could not die as long as he was in that condition, that we would just await developement. Early the next morning, much to my disappointment, he showed no evidence of coming from under the influence of the drug, pulse quicker, respiration quicker, circulation poor. Still had reflex movements, pupils responded to light drawing legs up in bed, and would still yawn. During the day this became less and less, and the pulse went up to 140 or more. He passed urine freely until an hour or two before he went to sleep. Kidneys seemed to secrete until the last. I drew off about a pint of urine by catheterization. The only treatment was nitroglycerine given hypodermatically.

THE TREATMENT OF TABES DORSALIS BY THE METHOD OF BONUZZI.

In the *Revue de Thèrapeutique Gènèrale et Thermale,* 1892, No. 2, p. 25, we find a clear and concise statement of this method, which it is hoped will yield results as satisfactory as those attributed to suspension, without, however, exposing the patient to the same danger, nor indeed requiring the use of any apparatus whatsoever. The experiments upon the cadaver have shown that the mechanical distention undergone by the spinal cord is three times as great in this method as in suspension. The patient lies upon the back, head maintained in an elevated position by means of a bolster. The lower extremities are flexed upon the body through a semicircle, the knees being placed upon the chest of the patient, the legs being held straight; the operator, seizing the diverging ankles, carries them strongly toward the floor. The result is, that the vertebral column is strongly flexed forward. This position must be attained with care, for it gives rise to backaches and swellings of the posterior aspects of the thighs, due to intra-muscular hæmorrhage. Benedikt reports a case where attacks of syncope and vomiting for many hours, with adynamia for several days, followed this treatment. It also has a greater effect upon respiration and circulation than does suspension; but the distention to which one subjects the trunk and limbs can be readily graduated, and if necessary, it can be immediately terminated. Benedikt reports that the gait of the patients was greatly improved, and the neuralgias markedly and constantly relieved.—*American Journal Medical Science.*

Selected Formulæ.

THE CYANIDE AND TRICYANIDE OF GOLD IN PHTHISIS PULMONALIS.

Dr. Oesterlen (*Pharmaceutische Zeitschrift für Russland; Le Bulletin Médical*, No. 101, 1891) recommends the following formula of the cyanide of gold in the treatment of phthisis:

℞ Cyanide of gold..... cgms. 18.
Chocolate..... gms. 45.

The cyanide of gold presents itself under the form of a yellow powder, insoluble in water, alcohol or ether. The crystals are only recognizable under the microscope. This preparation was proposed forty years ago by Chretien as a remedy for the treatment of pulmonary tuberculosis, scrofulosis and amenorrhœa. Later being forgotten, it recently has been proposed as a therapeutic resource in phthisis. The dose is from four to sixteen milligrammes several times a day. The tricyanide of gold comes in the form of large colorless crystals, which are soluble in water and alcohol. It has also been prescribed recently as a remedy in a phthisis.

SPECIAL TONIC (BELLEVUE HOSPITAL).

℞ Sulph. quinine..... 30 grains.
Tinct. nux vomica.....160 minims.
Tinct. chlor. iron.....160 minims.
Dilute phosphoric acid..... 1 fluid ounce.
Syrup to make..... 4 fluid ounces.
M. Dose, a teaspoonful.

POMADE FOR CERVICAL CYSTITIS IN WOMEN.

℞ Camphorated lanolin.....30 grms.
Ext. belladonna..... 2 grms.
M. Sig.—Introduce, morning and evening, into the vagina on a wad of cotton.

TREATMENT OF LUPUS ERYTHEMATOSUS OF EYELIDS AND FACE.

Brocq (*British Journal of Dermatology*, 1891) recommends in this disease:

℞ Salicylic acid..... ʒss.
Lactic acid..... ʒss.
Resorcin..... gr. xlv.
Zinc oxide.....ʒij.
Vaselin.....ʒxvij.

The following is also usually well borne:

℞ Salicylic acid..... 1 part.
Pyrogallol..... 2 parts.
Vaselin.....20 parts.
This is to be rubbed in at night. During the day the first named may be applied, the two being thus used conjointly.

TONSILLITIS.

Dr. Eloy (*Medicinische Neuigkeiten*, No. 8, 1892) recommends the local application of salol in the treatment of tonsillitis, and as follows:

℞ Salol.....gms. 2 (grs. xxx).
Alcohol, q. s., ad. sol.
Glycerine.....gms. 40 (fl. ʒjss).

For the painfulness in swallowing, gargle with:

℞ Cocaine hydrochlorate.....mgm. 1
(gr. 1-64th).
Glycerine.....gms. 10.
(ʒijss).

Or use Huchard's mixture:

℞ Bromide of potash.....gms. 5.
(ʒj¼).
Cocaine hydrochlorate..... mgms. 5.
(gr. ⅓)
Glycerine..... } āā gms. 10.
Peppermint water..... } (ʒijss).

TREATMENT OF ASTHMA.

℞ Potassium iodide.
Lobelia tincture.
Senega tincture..... āā 2.00 grms.
Opium extract..... 0.02 grm.
Distilled water.....180.00 grms.
Sig.—Tablespoonful, mornings and evenings, in a wineglassful of water.

—Huchard, *Revue Générale de Clinique et de Thérapeutique; Merck's Bull.*

ANODYNE LINIMENT.

℞ Camphor.....120 grains.
Chloral.....120 grains.
Chloroform..... 120 minims.
Ether.....120 minims.
Tincture opium..... 60 minims.
Oil sassafras..... 60 minims.
Soap liniment to make..... 16 fluid ounces.

FOR DYSPEPSIA.

For pain in the chest which comes on half an hour or an hour after food, take the following:
Take of

℞ Tincture of nux vomica.....10 drops.
Acid hydrochloric dilute.....10 drops.
Chloroform water..... ½ ounce.
Mix, and take immediately after meals.

LOOMIS' TONIC.

℞ Sulph. quinine..... 15 grains.
Tinct. chlor. iron.....120 minims.
Spirit chloroform.....180 minims.
Water..... 1 fluid ounce.
Glycerin to make..... 2 fluid ounces.—M.
Dose, a teaspoonful.

DANDRUFF.

Dr. Stephen (*Lo Sperimentale*, No. 18, 1891) praises the following:

℞ Resorcin..... } āā gms. 10.
Ol. olivar..... }
Ether..... }
Alcohol rectificat..... gms. 200.
Shake well and apply with a stout brush.

PURGATIVE INJECTION.

Dr. Porter (*Le Progrès Médical*, No. 50, 1891) recommends the following:

℞ Extr. bil. bovis.....gms. 25.
Glycerin.....gms. 100.
Ol ricin.....gms. 50.
Aquæ.....gms. 25.
Mix with one pint of warm soap and water.

DIABETES.

The following mixture is praised by Vigier:

℞ Lithii carbonat.....30 grains.
Sodii arseniat..... 1 grain.
Ext. gentianæ.....15 grains.
M. et div. in caps. no. xx.
Sig.—Take one capsule morning and evening.

INJECTION FOR OZÆNA.

The following is Sidlo's formula:

℞ Potass. chlorati..... 6.
Glycerini..... 30.
Aquæ destillat.....300.
M. To be injected, several times daily, in ozæna. Small rolls of cotton wet with a solution of glycerin (1 in 3) are also introduced thrice daily, and allowed to remain for one hour each time.

PRURITUS ANI.

Dr. Joseph M. Matthews has obtained excellent results from:

℞ Benz. oxide zinc oint.
Campho-phénique.....āā ℥ss.
M. Apply as often as necessary.

The campho-phénique may likewise be used pure, without detriment to skin or mucous membrane.

ECZEMA OF SCALP.

In inveterate eczema of the scalp Dr. Bedford Brown (*Maryland Med. Jour.*) found the following lotion by far the most certain:

℞ Ol. ricini.....f℥iv.
Bay rum.....f℥ij.
Acid salicyl.....℥ij.
Resorcine.....℥i.
Quinine sulphat.....grs. x.
This very active parasiticide is to be applied over the scalp night and morning and rubbed into the skin. He believes that perseverance in the use of this remedy will not only relieve most cases of this kind but will promote the growth of the hair.

OINTMENT FOR HÆMORRHOIDS.

℞ Hydrochlorate cocaine.....gr. xvj.
Sulphate of morphine.....gr. v.
Sulphate of atropine.....gr. iv.
Powdered tannin.....gr. xvj.
Vaseline.....℥j.
Essence of rose, q. s.
Make an ointment and apply to the affected parts after each movement from the bowels. It is necessary to have the discharges of soft consistency.
—*Journal American Medical Association.*

FOR THE PAROXYSM OF ASTHMA.

℞ Morphinæ sulphat.....gr. ¼.
Atropinæ sulphat.....
Nitro-glycerini..... āā gr. $\frac{1}{100}$—M.
Sig.—Add to sufficient sterile distilled water, and inject hypodermatically at the onset of the paroxysm.

REMOVAL OF EXTRAUTERINE FŒTUS FIVE MONTHS AFTER TERM: RECOVERY.

Delaissement (*Annales dé Gynec. et d' Obstèt.*, May, 1892) operated on May 7th, 1889, on a single woman, aged 20, who had become pregnant after the cessation of the menses in Febuary, 1888. On December 13th, 1888, labor pains came on two days later the fœtal movements; were plainly distinguished, and the heart sounds were audible. The cervix was like that of a virgin. By December 17th the pains had ceased. Afterwards the catamenia returned, the fœtal cyst remained as a tumor, resembling a large fibroid, and extending to the left hypochondrium. The tumor did not press down into the pelvis, the uterus was distinct and pressed forwards, and to the left. On May 7th the operation was performed. The fœtal cyst was not adherent to the abdominal walls; there was a fluctuating area on its upper part. In order to cut off all communication with the peritoneal cavity, sutures were passed through the cyst wall on each side of the wound. A brownish fluid escaped through the two uppermost suture tracts. The cyst was opened between the sutures. The fœtus lay aransversely, with the head to the left. The placenta, very thick, was attached anteroinferiorly; it was as tough as though macerated in alcohol, and was not vascular. The cavity of the cyst was washed out with hot water containing chloroform, and dresesd with carboltzed gauze; a large drainage tube was inserted. High temperature, with alarming symptoms, followed, and did not abate until the fifth day, when the placenta began to separate. Delaissement believes that the fever was due to infection of the peritoneum by the two upper sutures, and observes that sutures so applied should be made to pass along the substance of the fœtal cyst wall, and never across the cavity of the cyst. By June 5th all the placenta had come away. A year after the operation the patient was seen by Delaissement: She was in excellent health, and the catamenia were regular. There was a slight hernial protrusion inferiorly.—*British Medical Journal.*

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Leading Articles.

ETHER VERSUS CHLOROFORM AS AN ANÆSTHETIC.

The subject of this article is truly a hackneyed one, yet one in which every practitioner of medicine must always feel a keen interest. It has not been long since every medical periodical both in this country and abroad was teeming with articles on the merits and demerits of chloroform—this unusual and general interest having been excited by the labors of the Hyderabad Chloroform Commission under the able leadership of Dr. Lauder Brunton, of England.

The preference given to ether in this country and to chloroform in Germany are acknowledged facts. The position occupied by surgeons in other countries has been varying, each of these great anæsthetics having in turn been credited with the greater advantages outweighing their disadvantages. Both, unfortunately, have their disadvantages and dangers, but until the ideal anæsthetic has been discovered we must be content with what must prove the "lesser evil."

Poignant didactic arguments, based upon experimental researches, are always both interesting and instructive; and, therefore, a brief consideration of one of the most thorough and recent contributions on this subject may not be without good. The writer, Professor Julliard, of Geneva, published his paper in a recent number of the *Revue Medicale de la Suisse Romande*. "Ether," says Julliard, "is almost exclusively used by the surgeons of the United States and of Lyons, who never cease in extolling an anæsthetic so much less dangerous than chloroform."

The statistics gathered show a ratio of one death in every 3,258 cases of chloroformization, and one death in every 14,987 cases of etherization. The innocuity of ether—innocuity compared with that of chloroform—is incontestable, and all that

hinders its universal adoption as an anæsthetic are the several inconveniences that accompany or follow its use. In order to justly weigh the merits and demerits of ether, Julliard discusses these singly and without bias, and the result is markedly in favor of ether.

What are the disadvantages of ether ?

First, it is disagreeable to the patient. The inhalation of choloform is far more acceptable. Yet who, exclaims Julliard, would be guided by a question merely of pleasantness when it means the employment of a drug four or five times more dangerous to life? There is undoubted force in this argument, but the nausea, retching and vomiting so frequently induced by ether must still be regarded as a serious objection, capable of not only delaying the operation but also of weakening the patient, and not infrequently jeopardizing an ultimate good reaction from the operation.

Second, there is more difficulty in the administration of ether, and generally a more or less complicated apparatus is required. This objection, according to Julliard, is really without foundation. In truth, while ether inhalers in vogue are generally more complicated than the simple chloroform inhaler, yet their comparative complexity neither renders them awkward nor cumbersome in the hands of an experienced anæsthetizer. But apart from this, any complicated apparatus can be dispensed with.

Third, ether is less active than chloroform, and its action is considerably slower. While acknowledging this to be a fact, Julliard does not regard it as an objection, but rather as an advantage. In the first place, he has observed that even ether induces anæsthesia within five or six minutes in the majority of cases—surely satisfactorily rapid. Again, in such cases in which anæsthesia is not as quickly induced, naturally a larger quantity of the anæsthetic would have to be used, be it ether or chloroform, and in this event the use of the more slowly acting and less powerful poison should surely be given the preference.

Fourth, another objection to ether that may be raised, and which has frequently been offered by the supporters of chloroform, is that the complete insensibility obtained by chloroform cannot be produced by ether. The experiences of Julliard and other writers, however, fail to confirm this objection. On the contrary they have been able to produce a condition of insensibility equally as profound as with chloroform.

Fifth, it has also been claimed that the period of excitation is longer with ether and occurs more frequently. This has long been regarded by many as a most serious objection, but Julliard's experiments fail to show any appreciable difference in the periods of excitement of the two drugs.

Sixth, an objection to ether is its inflammability. In this respect chloroform has undoubtedly an advantage over ether. Still, if the lights are well placed above the patient, there is nothing to fear when the use of artificial light is demanded. Julliard has also used the thermo-cautery upon the thorax during anæsthetization with ether without harmful results.

Finally, another objection urged against ether is its irritating action upon the mucous membranes; producing cough, salivation, and an increased bronchial secretion. These unpleasant phenomena, while occuring occasionally, are not of a serious nature and may frequently be greatly lessened or entirely overcome by the proper administration of the drug.

The conclusions of the author, based upon fifteen years' experience with chloroform and fourteen years' experience with ether, may be briefly summed up as follows:

First, that ether is far less dangerous than chloroform.

Second, that the anæsthesia produced by ether is equally as complete and profound as that occasioned by chloroform.

Third, that the inconveniences of ether, absent in chloroform, may be greatly lessened by a proper administration of the drug.

Fourth, that the only contraindications for ether are its inflammability, and its action upon the respiratory mucous membranes in cases where these are diseased or are in bad condition.

The mask used by Julliard for the administration of ether resembles the simple chloroform mask with the following modifications: the outer portion is covered with some impermeable cloth, either mackintosh or rubber, to prevent the too rapid evaporation of the drug; it is also sufficiently large to permit of free respiration. The inhaler or mask is 15 centimetres long, 12 wide and 15 deep.

So much for Julliard's experiences and experiments. But he is not alone among Swiss and German surgeons in advocating the use of ether. Among German physicians in particular, who for a long time almost exclusively used chloroform as an anæsthetic, the gradual change of feeling is most marked. Garré, in the *Münch. Med. Wochenschrift*, gives the results of his experiments with both anæsthetics in a large number of cases, and heartily endorses the use of ether as a surgical anæsthetic in preference to chloroform. In 400 surgical cases in which ether was used as an anæsthetic, he observed that in those patients suffering from an organic lesion of the heart the drug was well borne and even exerted a beneficial action upon the affected organ; while in cases of respiratory troubles the irritative properties of ether rendered its use very objectionable. He concludes, therefore, that ether is preferable to chloroform in patients suffering from cardiac troubles; but on the contrary that chloroform is preferable to ether in cases of bronchial catarrh and similar affections. Garré found that anæsthesia occurs on an average in about four minutes, and that about 80cc. are required to maintain anæsthesia for a half an hour.

Dr. Frieter, in a recent issue of the *Deutsche Zeit. für Chirurgie*, also pleads the cause of ether as a general surgical anæsthetic; and Dr. Butter, in the *Archiv. fur Klin. Chirurgie*, speaks most highly of ether as a substitute for chloroform in general surgery.

A great advantage of ether over chloroform, as recently pointed out by these investigators, is the rapidity with which patients recover from the effects of ether as compared with chloroform. Death from anæsthetization syncope, they also claim, will almost be unknown should ether be used instead of chloroform.

Thus an anæsthetic, the superior merits of which have long been recognized by the surgeons in this country, is now only gradually asserting its claims among our professional brethren abroad.

ACETONÆMIA.

From a clinical and experimental study of the subject, Boesi (*Riv. di clin. et terap. Rev. Intérn. de Bibliog. Med.*, April 25, 1892) has drawn the following conclusions: 1. Acetonæmia exists in the physiological state, as has been sustained by Jacksh, Baginski, and others, its amount fluctuating from 12 to 15 milligrammes. It does not become a pathological process until it has passed this quantity. 2. An experimental acetonaemia can be produced by the administration of agents which especially destroy the blood, such as pyrodine. A lack of oxygen in the blood is an auto-intoxicating cause of acetonæmia. Pathologically, the condition is observed in malarial anæmia, in catarrhal icterus, in the febrile acetonæmic state whose cause resides in the destruction of the blood-cells and the albumin of the tissues themselves. 3. The acetonæmia of intestinal origin is not dangerous, but it has of late been exaggerated. The diminution in the alkalinity of the blood is not the cause of acetonæmia, but a phenomenon belonging to the order of the auto-intoxications.

Book Reviews.

DISEASES OF THE EYE. A Hand-book of Ophthalmic Practice for Students and Practitioners. By G. E. de Schweinitz, M. D., Professor of Diseases of the Eye in the Philadelphia Polyclinic; Lecturer on Medical Ophthalmology in the University of Pennsylvania; Ophthalmic Surgeon to the Philadelphia Hospital, and to the Children's Hospital and Infirmary for Nervous Diseases. 216 illustrations and 2 chromolithograph plates. Philadelphia: W. B. Saunders, 1892.

No one who is at all interested in the study of ophthalmology can fail to appreciate this latest contribution to the standard text-books on this subject. Close observation, a keen sense of appreciation, an association with the best minds engaged in the study of ophthalmology in Philadelphia, a rich practical experience, together with careful study, have eminently fitted the author of this admirable work to give us the best American text-book that has been published in this special field of medical science.

A critical reading aided by a comparison with other standard works of the kind convinces us that it is destined to fill a prominent place among the standard works upon diseases of the eye. It is pre-eminently a book for those wishing a clear yet comprehensive and full knowledge of the fundamental truths which underlie and govern the practice of ophthalmology. The author has kept well in view his purpose in preparing the book.

It is seldom that we find greater clearness of expression, combined with a graceful and pleasing style, than is here shown in the elucidation of general optical principles, methods of examination, symptomatology and diagnosis. Everywhere the text has been systematically arranged; this is particularly true of the description of the symptom-groups, which include under minor headings the variations caused by the different grades or types of the same pathological state. The section devoted to the consideration of general optical principles is excellently adapted for the use of students; being clear, concise and finely illustrated by appropriate diagrams.

The chapter upon refraction is contributed by James Wallace, M. D., and it is of such excellence that it creates a wish that it had been expedient to make it more extended. The author's long experience in the eye department of the University of Pennsylvania Hospital is itself evidence that this portion of the work has been in competent hands.

The section upon retinoscopy was contributed by another able ophthalmologist, Dr. Edward Jackson, Professor of Ophthalmology in the Philadelphia Polyclinic. It is needless to say that this part of the book is also exceedingly well done.

Taken together we think that with such a clear and most excellent exposition of the principles of ophthalmology, written by such entirely competent men, there will be little need for European text-books upon this subject; for while symptomatology, diagnosis, and technique of the examination of the eyes have received the largest consideration, neither pathology nor treatment have been neglected. It justly may be pronounced a complete statement of the essential facts of ophthalmology.

Periscope.

THERAPEUTICS.

FACIAL NEURALGIA.

Dr. Stewart thinks hypodermic injections of ergotin in facial neuralgia to be superior to aconite or gelsemium. Generally one injection is sufficient, but sometimes two or even three may become necessary.—*The Medic. Anal. Gaceta Medica Catalana,* 10, 1890.

MICROCIDINE IN URINARY ANTISEPSIS.

Although there are many antiseptic remedies useful in the treatment of disorders of the urinary tract, Mabboux (*Lyon Méd.*, April 3, 1892) prefers, in the application of direct and indirect antisepsis, the employment of *microcidine*, which, as is well known, is composed of naphtol and caustic soda. The solution of this remedy is, according to the author, sufficiently efficacious for all manner of surgical antisepsis. It does not produce pain in the urethra nor in the bladder. In cases of cystitis, washing with microcidine are more advantageous than those in which boric acid is employed. The medicament is easily tolerated by the stomach, in doses of 2 grammes a day, producing good results. In direct antisepsis microcidine is not superior to salol, but it may be employed in patients suffering from albuminuria and other diseases of the kidneys, without causing untoward effects.

POISONING BY ATRACTYLIS GUMMIFORA.

This plant belongs to the order of the Compositæ, and is supposed to be of an edible nature. It has bitter and narcotic properties resembling those of poisonous mushrooms, and, like digitalis, is said to possess cardio-vascular powers. Two fatal cases of poisoning by atractylis are reported by Courcenet (*Arch. de Med. Milit.*, April, 1892). The symptoms observed were as follows: Pain in the stomach; great, burning thirst; vomiting; profound depression; muscular relaxation; loss of consciousness, and death by coma, but without convulsions. At the autopsy, there were found ecchymosis on the walls of the stomach, and hæmorrhagic foci in the kidneys; the blood was of a dark color and of a liquid consistency; sanguinous stasis in the abdominal viscera, the liver, and the cortical substance of the kidney. There were no lesions of the respiratory organs or of the nerve centres. The author points out the necessity, in medico-legal cases, of looking for the poison in the contents of the digestive tract, and especially in those of the stomach and the intestines.

GLYCERINE IN HEPATIC COLIC.

At a meeting of the Paris Academy of Medicine on March 8th (*Sem. Méd.*, March 9th, 1892), Ferrand read a paper on the treatment of hepatic colic by glycerine. The following are his conclusions: (1) Glycerine given by the stomach is absorbed unchanged by means of the lymphatics, especially by those passing between the stomach and the hilum of the liver and the gall bladder. (2) It is a powerful cholagogue and a valuable remedy in hepatic colic. (3) In relatively large doses—20 to 30 grammes—it brings an attack to an end. (4) In small doses—5 to 15 grammes—glycerine taken every day in a little alkaline water prevents fresh attacks. (5) Without being a lithontriptic, glycerine is the remedy *par excellence* for biliary lithiasis.—*Brit. Med. Jour.*

THE DANGER OF COUNTER-IRRITATION IN LOCALISED TUBERCULOSIS.

According to Parrachia Anacleto, counter-irritation in localised tuberculosis is attended with great danger. Miliary tuberculosis spreads so rapidly from one organ to another by way of the veins and lymphatics that any irritation set up at the seat of the primary mischief cannot fail to increase the tendency of the disease to become general. Four cases which have recently come under his notice show this in a remarkable degree. Tuberculosis progresses slowly, but it allows of no violent remedies, and he thinks, until some method of treatment more successful than either the injection of tuberculin, or cantharidate of potash, or the application of blisters has been discovered, the danger of causing general infection by their adoption will still remain.—*Lancet.*

ACTION OF CAMPHORATED OIL.

At a meeting of the Società Lancisiana degli Ospedali di Roma on February 13th (*Gazz. d. Osp.*, March 8th, 1892), L. Taussia stated that he had used camphorated oil with good results in many cases of influenza in which collapse from cardiac paralysis appeared to be imminent, and in pneumonia, typhoid, etc. He gave the drug dissolved in oil of sweet almonds in the strength of 1 to 2, and sometimes 4 to 5 per cent. Essence of peppermint was useful in disguising the taste. Liberal doses (2 to 4 grammes *per diem*) were always given; the remedy was always well borne, and no disagreeable effects were observed. The remedy should be given before the patient is *in extremis*, when an active stimulant and expectorant is required, and when it is not contraindicated by the existence of great cerebral excitement. In cases of pneumonia, bronchopneumonia, and typhoid fever, the drug produced increase of arterial pressure, freer expectoration, and a feeling of physical well-being which lasted a considerable time. Taussia insists that only the best Japanese camphor should be used, the artificial preparation having, according to him, no therapeutic value.—*Brit. Med. Jour.*

PHENACETIN IN GONORRHŒAL RHEUMATISM.

Dr. Rifat (*Norsk Magazin for Lœgevidenskaben*, No. 5, 1891) relies upon phenacetin in large doses when the salicylate of soda, iodide of potash and antipyrin fail. The first day one may give one gramme three times daily, then increase the dose

until six or eight grammes (1½–3 ʒ) are taken in a day. The patient must be watched for signs of poisoning—dyspnœa, cyanosis, vomiting, etc.

A NEW TREATMENT OF ACUTE GONORRHŒA.

Cotes and Slater (*Lancet,* London, February 27, 1892) describes a new treatment for acute gonorrhœa. The patient is first made to micturate, and thus remove as much discharge from the urethra as possible. The endoscope tube, warmed and oiled, is then passed into the urethra, the patient lying on a couch. As a rule, the passage of the instrument gives rise to but slight pain, but occasionally, in sensitive patients, a ten per cent. solution of cocaine, previously injected into the urethra, will be found useful. The urethra is then thoroughly mopped with dry cotton-wool, fixed in a stilet, and examined by the electric light. The exact limit of the inflammation can be clearly seen. It is, as a rule, quite five inches from the meatus; it may be four as early as the third day. The implicated surface is at once to be recognized by its swollen, bright-red appearance as contrasted with the rosy color of the healthy urethra. It is important not to pass the endoscope needlessly far back of the posterior limit of the inflammation, which is usually sharply defined. The diseased membrane should now be carefully mopped again so as to remove every vestige of secretion. A mop of cotton-wool, on a stilet, charged with a solution of nitrate of silver (10 grains to the ounce), should be pushed through the endoscope tube and out the distal end. The tube and the mop are then simultaneously withdrawn. For the two inches of urethra near the meatus a fresh mop is used, so as to completely saturate this part, where the disease commences, and the inflammation is most intense. Patients generally complain of slight pain afterward, which, however, passes away in the course of ten minutes. The patient is recommended to take a hot bath that night and remain in bed the following day. A saline purgative and an alkaline or copaiba mixture are given internally. From four to six times daily the patient should use a simple cleaning injection—say Condy's fluid, (one drachm to the pint). The forty-cases treated in this manner have been cured in a little over twelve days; a few cases had lasted for some days, and some were associated with chordee.

The principal points of this treatment are:

(1) The urethra can be cleansed so that the application comes directly in contact with the diseased membrane.

(2) The extent of diseased surface may be seen.

(3) The remedy is applied when the urethral walls are stretched, so that all furrows are obliterated.

They think that nitrate of silver is the best of all injecting fluids, from the fact that, in the strength of 1 to 2,000, it kills the organisms and produces very little irritation, and at the same time exerts a healing influence on the inflamed membrane.—*Univ. Med. Mag.*

MEDICINE.

INFLUENCE OF STOMACH WASHINGS ON THE ASSIMILATION OF NITROGENOUS ARTICLES OF FOOD.

In a very interesting thesis, J. A. Ouaroff, (*Wratch*, No. 51,1892, *Bull. Gen. de Therap.*, March 30, 1892) discusses this important practical point. The observations were made in five patients; 3 of whom were suffering from chronic catarrh of the stomach, and two with catarrh accompanied with dilatation of the organ. Five other observations were made on healthy individuals. Each experiment lasted 16 days, and comprised 2 periods of 8 days each, one of these *with*, and the other *without* the washings. Upon healthy persons the washings improved the assimilation of the nitrogenous substances in the following proportions: maximum, 3.75 per 100; minimum, 0.47 per 100; medium, 2.21 per 100. In 3 patients the assimilative powers were increased also, in the proportion of 2.79 per 100, for the maximun: 1.67 per hundred for the minimum, and 2.39 per 100 for the medium. In 2 patients the assimilation was diminished; in one, 1.13 per 100; in the other, 1.33 per 100. This diminution depends upon the retention of the liquid in the stomach. According to the author, the washing out of the stomach improves the function of the organ, diminishes

stagnation and fermentation, and increases, reflexly, the activity of the biliary and pancreatic secretions. Under the influence of the treatment, the bodily weight and the forces of the patient increase, showing the favorable action which the stomach washings exercise on nitrogenous assimilation.

HYSTERICAL ARYTHMIC CHOREA.

From an interesting thesis, published this year, by Dettling (*Rev. gener. de Clin. et de Therap.*, April 20, 1892), the following conclusions are drawn: 1. The theory regarding the co-existence and simultaneous development of Sydenham's choreas and hysteria, may hold good in certain cases, but exceptionally so. 2. The hypothesis which makes of common chorea a modification of hysteria, and which is based on very uncertain points, is rejected by the author. 3. The theory admitted by the French observer is that by which hysteria may simulate the arythmic movements of common chorea, producing a pseudo-chorea of a Sydenham type, and which he calls a hysterical arythmic chorea; but there is no such a thing as a Sydenham chorea of a hysterical nature. The hysterical arythmic chorea may, therefore, be placed under the same category as that of the pseudo-scleroses and hysterical pseudotabes. Hysteria may give rise to the production of a quite marked common chorea, but this arythmic chorea is to be differentiated from Sydenham's chorea. Its onset is sudden, and exhibits a variety of hysterical symptoms. Its duration is similarly various; it always gets well, spontaneously often, and frequently relapses if it occur. It ought to be looked upon as a prolonged attack of paroxysmal hysteria. The treatment should be of a tonic nature. Antipyrine has given good results in many cases.

MERCURIAL GASTRO-ENTERITIS.

In an experimental research, P. de Michele (*Rivista Clinica et Terapeutica*, Naples, XIV, No. 2, 1892) has endeavored to determine the nature of the lesions produced in the digestive tract, under the action of mercury, and which of those lesions are the least dangerous. The experiments were made on rabbits, and the modes of administration of the drug were such as are serially pointed out presently. No lesion was observed in the first series of experiments, while in the rest, the drug was found capable of producing a rapid and serious fatty degeneration of the mucous glands: 1. Hypodermatic or parenchymatous injections of calomel, according to the method of Sarenzio. 2. Albuminate or tannate of mercury by the stomach. 3. Injections of the albuminate, according to the formula of Miahle. 4. Internal administration of the protiodide of mercury. 5. Injections of corrosive sublimate. 6. Van Sweiten's solution or simple solution of corrosive sublimate by the stomach.

TEMPORARY DYSPNŒA CAUSED BY A TUMOR OF THE NECK.

The following case is reported by Pergens (*Archivos Internacionales de Rinologia*, No. 14, 1892): A country farm-boy, 16 years of age, had a tumor situated on the superior portion of the right side of the neck. He complained of aphonia every time a current of air struck him, and also of a sensation of constriction in the throat. On examination there was observed a distention of the skin at the superior part of the right side of the neck, and at the maxillary angle about two centimetres from the protuberance of the chin. The laryngeal mirror revealed nothing abnormal. During the condition of aphonia there was no change noticed externally, but in the larynx only the left vocal cord could be seen; the right cord was hidden behind a rounded protuberance, covered by a normal mucous membrane. After a few days, this condition disappeared; the voice came back and the intra-laryngeal swelling was greatly diminished. By an operation, the glands and the hypertropied submaxillary gland were raised. After this, a cure was effected and the symptoms of aphonia never returned. These symptoms were attributed to an inflammatory process, being produced by the action of cold upon the diseased ganglions.

DILATATION OF THE GLOTTIS IN LARYNGISMUS STRIDULUS.

Dilatation of the glottis, a valuable means to combat the spasm of the organ, should be employed in the symptomatic treatment

of the malady under consideration. The procedure consists in the introduction into the orifice of the glottis of a dilator with parallel branches; pressure should be made three or four times, and when the mucosities have been expelled the instrument should be removed. In a case reported by Constantin Paul (*Societe de Therapeutique,* February 10, 1892) the spasm ceased immediately. For a few moments the sibilant respiration and the access of oppression were noticed; but the child was able soon after to suckle.

SURGERY.

THE SURGICAL TREATMENT OF GRANULAR LIDS.

Darier, the chief of Abadie's Clinic in Paris, contributes an article in the *Archiv. d'Ophthalmologie*, February, 1892, concerning the treatment of granular lids, which has been found efficacious in this service. The following points are insisted upon:

(1) Anæsthesia with chloroform is indispensable in every case. (2) One of the most important conditions for the success of the operation is the complete eversion of the eyelids by means of special forceps, so that all points of the conjunctival cul-de-sac may be laid bare and submitted to grattage. (3) In order to attain this object it is very often necessary to enlarge the palpebral slit by incising the outer canthus and thus facilitating the exposure of every portion of the conjunctival cul-de-sac which is in the least affected with granular infiltration. (4) Scarifications are performed with the object of making the contents of the granulations apparent with the least destruction of the conjunctiva. (5) By means of a sharp scraper, and then of a brush composed of short, hard hairs, all morbid tissue is scraped and brushed as completely as possible. (6) An energetic and painstaking cleansing of the surface with a plug of cotton dipped in a sublimate solution, 1–500, ends the operation.

During the first day, iced compresses are applied and frequent lotions of sublimate solution, 1-2000. The patient should be examined daily, the eyelids everted, any sloughs detached, and the whole surface thoroughly cleansed with a sublimate solution, 1-500. At the end of fifteen days the conjunctiva presents a smooth, though somewhat tumefied, appearance, but granulations are invisible and there is no longer any secretion. In the event of the previous pannus, or other corneal complication, the improvement, dating from the first day of the operation, is stated to be surprising, and in the judgment of the reporter there is no treatment which has given such good results in so short a time. He attaches great importance to the regular use of a strong solution of sublimate, and recommends that the patients be watched for a month or two after the operation, and prompt interference be undertaken in case the smallest trace of the former disease should reappear.—*Ther. Gaz.*

HERNIÆ OF THE LARGE INTESTINE.

Gangolphe (*Lyon Mèd.*, January 17th, 1892) describes a case of hernia of the large intestine, from a consideration of which he makes the following generalizations: (1) Herniæ of the large intestine may be accompanied by an appendicitis in the hernial sack. (2) The localization of the inflammatory troubles to the hernia, the appearance of the fœtid suppuration without issue of gas or of solid matters, without serious functional troubles of the intestines, may perhaps in the future help in the diagnosis of this complication. (3) The radical cure, undertaken after a sufficient delay, is rendered particularly difficult, both by the adhesions which form and also by the difficulty experienced in recognizing the presence of the intestine. (4) As a general rule the necessary incision should be made along the antero-internal parts of herniæ, for in this way wounding the large intestine, should this be present, will be avoided.—*Brit. Med, Jour.*

OBSTETRICS.

DETERMINATION OF SEX.

The *Dublin Journal of the Medical Sciences* for March, quoting from *La Sperimentale*, says that "Dr. Serrano Montanel, of Valparaiso, read a paper before the last Chilian Medical Congress on the pro-

creation of either sex at will. After four years' observation, he had satisfied himself that we can pronounce upon the sex of an unborn fœtus if we know the number of menstruations which had occurred between the preceding delivery and the present pregnancy. If between the birth of one baby and the conception of the next an even number of menstruations have taken place, the second will be of the same sex as the first; if an uneven number, of different sex. This theory assumes the identity of menstruation and ovulation, which few accept, and also that ova discharged are of alternate sexes.

PHOCOMELOUS INFANT.

Martin Saint-Ange (*Jour. de l'Anat. et de la Physiol.*, No. 5, 1891) records a case of phocomelous monster with internal anomalies; the notes and description were found by Duvernet, and were published posthumously. The mother, aged 33, had previously given birth to two well-formed children. During her third pregnancy she had suffered from syncopal attacks and excessive irritability, alternating with melancholia. Fœtal movements were first felt at the sixth month, and were always very feeble. Labor occurred spontaneously at the ninth month, the breech presented, and delivery soon followed. There was some fibroid thickening of the placenta. The infant, which was living during labor, was born dead; it was of ordinary dimensions with the exception of the limbs, which resembled those of an embryo of a few months. There was symmetrical phocomely; each extremity terminated in six digits, which were very short and webbed; the bones of the carpus and tarsus formed an irregular mass; the two leg bones were united; the femora were nearly shapeless, and the humerus was normal in form but fused to the bones of the forearm. The heart was situated transversely, the foramen ovale was very large, as was also the ductus arteriosus, and there was a left superior vena cava, as well as the usual one on the right side. There was a large cleft of the palate, and the tongue, which was very small, was firmly fixed by a very short frænum. There were curious mammillated projections on the margins of the jaws. The right testicle was in the iliac fossa, the left in the scrotum. The penis was very small, and consisted of an imperforated glans and a divided prepuce. The urethral canal did not exist, but a duct passed from the inferior and posterior part of the bladder to the anal extremity of the rectum. This arrangement resembled that found in the monotrematous mammalia. A maternal impression was alleged as the cause, but, as it occurred late in pregnancy, this theory could not be entertained.—*Brit. Med. Jour.*

GYNECOLOGY.

RESECTION OF OVARIES AND TUBES.

A. Martin gives his (*Verhandl. d. Deutsch. Gesellsch. f. Gynäkologie*, 1891) experience of resection of ovaries and tubes, and expects that the operation will soon be recognized generally as a proper one. It is designed for the purpose of retaining for the woman her functional capacity. When, on removing one ovary or one set of adnexa, the other is found only partially involved in the disease, it need not be wholly removed. The diseased part of the ovary or tube is resected, and the remaining part is left, an artificial ostium abdominale being formed in the case of the tube. His results of resection of ovaries are—21 cases, 1 death from peritonitis. Of the 20 survivors, 5 have become pregnant, one operated on in May, 1888, having had 3 children. He has had 24 cases of resection of tubes,—1 death from general infection of the peritoneum by gonococci. Of the 23 survivors 1 became pregnant, but aborted in the third month.

ASCITES IN WOMEN, UNASSOCIATED WITH CARDIAC, HEPATIC, OR RENAL DISEASE.

Gusserow (*Centralbl. f. Gynäk.*, No. 19, 1892) opened an instructive discussion on this subject at a recent meeting of the Berlin Obstetrical Society. He for many years has always made an exploratory incision in these cases, being ready to take away any removable morbid growth that may be discovered. The conditions which give rise to this form of ascites are, according to Gusserow: (1) tuberculous peritonitis or "peritonitis nodosa" where no tubercle bacilli can be found; (2) pa-

pilloma of the surface of the ovary; (3) carcinoma and sarcoma of the ovary, usually with similar disease of the peritoneum; and lastly (4) rare cases where ascites exists in association with small non-malignant uterine and ovarian tumors or with tubal disease. In all these cases there is absence of œdema of the integuments and no signs of disease of the liver, heart, or kidneys. He rejects exploratory puncture, whether by means of a hypodermic syringe or the old trocar. Schäffer said that the ascitic fluid in cases of dropsy from inflammation or irritation of the peritoneum is of a specific gravity always exceeding 1015; whilst in cases of dropsy from stasis—including hepatic cirrhosis compressing large veins, and tumors or aneurisms pressing on the vena cava, diseases which may for long show no other symptom—the specific gravity of the fluid seldom exceeds 1012. Hence puncture is sometimes preferable to incision. The apparent cure of many cases of suspected "tuberculous peritonitis," when the ascitic fluid has been evacuated, suggests a non-tuberculous "peritonitis nodosa" imperfectly recognized by pathologists. Mackenrodt believes in this distinction, and declares that he has never known a case of cure after incision where true tubercle of the peritoneum was detected. He has frequently seen a diffused vesicular disease of the peritoneum associated with ascites—"herpes peritonei." This affection was not malignant and the ascites did not return after incision. Ascites is sometimes caused by enlarged non-malignant retroperitoneal glands; incision seems to cure these cases. Mackenrodt objects to puncture, as it may involve hæmorrhage or damage to internal organs; in incision these accidents are rare, and when they occur cannot be overlooked. Winter has not entirely rejected puncture; it allows of bimanual exploration of the pelvic organs. Incision is not without danger, and hastens death in cases of carcinoma. Gottschalk believes in a distinct peritonitis nodosa, but incision, he stated, sometimes cures true tuberculous peritonitis. Jaque related a case of severe hæmorrhage following puncture. In reply, Gusserow said that a low specific gravity of the fluid does not necessarily signify that the cause of disease is not removable by operation. Puncture does not allow of so perfect exploration as does incision.—*Brit. Med. Jour.*

PEDIATRICS.

TREATMENT OF CHOREA.

From a study of this important subject, Jumon (*La Medicine Moderne,* No. 9, 1892) has formulated the following conclusions: 1. In common choreas, the best results are obtained from the use of antipyrine and arsenic. 2. In the rheumatic choreas, or with rheumatic manifestations, antipyrine is still indicated, but to this drug may be associated the salicylate of sodium and sulphur baths which are certainly useful. 3. If there should be a large amount of hysteric element, the bromides, according to Dujardin-Beaumetz and Ollivier, are to be employed; 4. Finally in cardiac choreas, instead chloral and hydrotherapy both of which are dangerous, the iodide of potassium and especially that of calcium should be used, 5. In all cases physical exercise is to be recommended; especially at the gymnasium, this being often of great advantage.

TYPHOID FEVER IN CHILDREN.

A. Moussous (*Arch. Clin. de Bordeaux.* No. 4, 1892) states that in a series of fifty consecutive cases of typhoid fever in children under the age of 15 years he had only three deaths. He fully accepts the opinion that the disease is less serious in childhood than in adult life; there is less prostration, less hebetude, and seldom much diarrhœa or pneumonia. At the same time the fever presents the same characters as in the adult, and is often high—104° and even more; the pulse rate is often also increased to 140, but this rapidity has not the serious significance which it would have in the adult, nor are complications so often observed. The disease, however, is more severe in infants under 2 years than in children above that age; this fact is called in evidence to support the view that one of the reasons of the comparative mildness of the disease in children is the activity of their digestive secretions, which tend to inhibit the growth of the pathogenic organism. Another reason he finds in the greater functional activity of the liver and kidneys leading to a more perfect elimination of the poisonous bodies produced within the organism during the fever. On this head Moussous presents some new observations. Bouchard and others have

shown that the toxicity of the urine is increased by typhoid fever, and that this toxicity persists for a varying period after defervescence, for as much as four or five weeks when the disease is treated by the expectant method, for still longer if antipyrin is used. With the cold bath method the toxicity of the urine is very high during the fever, but ceases quickly when defervescence has taken place (Roque and Weill); naphthol diminishes the production of the poisonous substances both during the fever and during convalescence. Moussous finds the toxicity of the urine in children suffering from typhoid fever is sometimes increased during the pyrexial period, sometimes at its close, but that in either case it becomes normal after a few days of freedom from fever. The elimination of the poisonous substances, therefore, in children who are treated by the expectant method very nearly resembles their elimination in adults treated by baths. Moussous does not recommend resort to baths in the case of children, and notes one case in which serious syncope followed cold sponging. He advises the administration of laxatives every other day, a copious milk diet and small doses of quinine. —*Brit. Med. Jour.*

HYGIENE.

VACCINATION STATISTICS.

There still are found numerous opponents of protective vaccination and no amount of evidence seems sufficient to convince their biased minds. Yet the following statistics, capable of but one interpretation, may prove of interest: In Riga, a city of 180,000 inhabitants, there were some 6,500 belonging to a religious sect living by themselves in a certain quarter of the town. These people opposed the practice of vaccination on conscientious grounds. Between the years 1882 and 1887, the average mortality from small-pox in the city was 108 annually. From December, 1886, to the end of March, 1887, about four months, there were 155 deaths from this cause, owing to a slight epidemic during that period. Of this number 71 occurred among the orthodox population, equal to 109 per 10,000, while the deaths among the remaining inhabitants numbered only 84, equal to 4.8 per 10,000. Down to the year 1887, as stated above, the average number of deaths annually from small-pox was 108. After this epidemic vaccination and revaccination were largely enforced, with the result that from 108 the annual number of deaths due to this disease fell at once to 8.

NUTRITIVE VALUE OF MILK.

A child brought up on milk alone, and weighing at birth 3,200 grams, will gain in weight as follows:

During the	1st	three months	.....	23.35 gr. daily
"	2nd	"	.....	18.35 "
"	3rd	"	.....	13.5 "
"	4th	"	.....	8.00 "

Making the increase of weight during the first year about 6 kilograms.

During the 2nd year the increase in weight will be about 2 k. 000 gr.
During the 3rd year the increase in weight will be about 1 k. 200 gr.
During the 4th year the increase in weight will be about 1 k. 700 gr.

Making up to 5 years, a total increase of 12 k. 570 gr.—M. P. Cules, *in Rep. de Pharmacie.*

THE TRANSMISSIBILITY OF CARCINOMA

At a meeting of the Académie des Sciences, Duplay and Cazin (*La Mèdecine Modérne*, 1892, No. 8, p. 113) reported the results of investigations as to the inoculability of carcinoma. In a first series, comprising twenty-two observations, they inoculated, either subcutaneously into the peritoneum or into the blood, rabbits, guinea pigs, and dogs, with carcinomatous material obtained from man, in all instances with positive results. In a second series of experiments they inoculated animals with carcinomatous material obtained from dogs, but without producing more than a local inflammatory lesion, which underwent absorption. Attempts to transmit carcinoma from dog to dog also failed.

MEDICAL CHEMISTRY.

EGGIO.

This is a commercial article, presumably made from the yolks of eggs, the whites of which have been used for preparing egg albumin. An analysis recently made by C. S. Boyer, and reported to the Chemical Section of Franklin Institute, gives its composition by analysis as water, 53.75 to

56.91 per cent. ash, 9.47 to 19.25; fatty acids, 14.66 to 16.00. The yolk of egg examined by same method gives water, 51.8 to 53.72; ash, 1.0; fatty acids, 20.0. The conclusion is that the ash indicates the presence of sodium salts to prevent putrefaction, the presence of a little more water, and a little less of fatty acids than the egg yolk itself.

REAGENT FOR TANNIN.

Bæmes (*Monit. de la Pharm.*, 1891, 1006) uses as a reagent for tannin a solution containing in 10 cc., 1 gm. sodium tungstate and 2 gm. sodium acetate. This yields with tannin in acid or alkaline solution a straw-colored precipitate which is insoluble in water. The reaction is said to be very sensitive.

LITHIUM NITRIDE.

By heating lithium in a current of nitrogen gas, Ouvrard (*Comptes Rendus*, cxiv-120) has obtained a product containing 38 to 56 per cent of nitrogen, and his analysis leads him to conclude that the compound formed may be represented by the formula $Li_3 N$, or ammonia in which the hydrogen is replaced by three atoms of lithium.—*Pharm. Journ.*

ANTIPYRINE AND EUPHORINE.

When these two bodies are triturated it becomes difficult to obtain a powder that will admit of subdivision into papers. To overcome this, J. Mindls in the *Prag. Rdsch.* adds a little sugar and mixes with a spoon or spatula. A better powder may be obtained by rubbing the sugar first with a little bicarbonate of sodium before adding the medicaments. Powdered licorice root answers even better than sugar.

EXODYNE.

Exodyne (*Odyne*, pain) marketed by by the Orange Chemical Co. as the greatest analgesic and antirheumatic, consists, according to F. Goldmann (*Pharm. Zeit.*) of approximately 90 per cent. acetanilid, 5 per cent. sodium salicylate, and 5 per cent sodium bicarbonate.

NEWS AND MISCELLANY.

BOTTLING UP CHOLERA BACILLI.

A significant commentary on the question of interment in city cemeteries *v.* cremation is suggested by the incidents connected with a proposal in the Leeds Corporation Bill to drive a street through St. Mary's Churchyard, where a great number of cholera cases were interred, and Dr. Spottiswoode Cameron, in reporting against the proposed improvement, says: "The whole of the district is shale and clay. The corpses have, therefore, been bottled up for these sixty years in a practically impervious casing. I find there has been no epidemic in that neighborhood within memory of my present inspectors, and I find no record of any whatever. My own feeling about the matter is that I should be inclined to let well alone. Although the chances are strongly that, during the sixty years that are gone, the coma bacilli have died of inanition, there is a possibility that it may not be so, and that the opening of these graves might lead to disaster." The clause will be withdrawn and the clay-conserved bacilli left at rest.—*Brit. Med. Jour.*

TRICHINOSIS OF THE TONGUE.

A curious and interesting case, albeit somewhat difficult to understand, is recorded by Dr. Oitiz of Toire. The patient was a man, æt. 50, a robust countryman, with no history of syphilis nor of tuberculosis, who came for advice with an ulcerated growth of his tongue. The disease had been in progress about a year, and presented the characters of an epithelioma. Some misgivings, however, were expressed about the precise diagnosis, inasmuch as the ulceration was not of that foul nature such as usually occurs in connection with malignant disease. No improvement having followed the treatment adopted after a trial of a fortnight, it was decided to amputate the tongue. This was successfully performed, and on examination of the organ subsequently, the disease was found to be trichinosis, ulceration of the thickened tissue around the cysts having taking place.—*Med. Press.*

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THE
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Clinical Lectures.

ECLAMPSIA.

By DR. ROBERT OLSHAUSEN,
BERLIN, GERMANY.

PART III. (CONCLUSION.)

Continued from Page 46.

THE THEORY OF ECLAMPSIA.

We now come to a consideration of the theory of the disease. For a long time there have been two main views taken of this question. The one accepts the hypothesis of intoxication as a cause of the disease, while the other view looks for this in a change in the brain caused by anæmia and œdema.

The last named theory, which is usually designated as the Traube-Rosenstein theory has from the very first stood upon a very weak support, because it has been neither anatomically nor clinically proven, and also because the experimental support, which it received from an experiment on an animal by Oppler, was entirely valueless. This experiment was a single one, and so complicated, that just conclusions could not be gathered therefrom. The theory lacked in anatomical support for the reason that in the majority of all fatal cases any very great changes of the central nervous system are not recognized. Instead of the referred to anæmia of the brain, on the contrary a condition of hyperæmia is more frequently found, and also in only a part of the subjects, a slight œdema of the brain, or more frequently of the piamater is found. This œdema of the brain on which the coma is said to entirely depend, must be present in every case of eclampsia, according to the Traube-Rosenstein theory. Yet, I have seen as many as dozens of cases, in which even after long continued coma there was not the slightest vestige of œdema. Indeed, in the already mentioned case of eclampsia in which there were 104 attacks, the brain was so dry, that my colleague, who was performing the autopsy for me, said that one could speak of the presence of sclerosis with far greater justification than œdema.

The theory lacks clinical support, because it disregards the almost always present kidney symptoms. It only explain the rare exceptive cases in which there is no albuminuria. A theory which is expected to carry weight must above all things explain the rule rather than the exception. Further, the theory renders the presence of labor pains an almost absolute necessity for the existence of the disease; for the contracting uterus is supposed to compress the abdominal aorta, and to increase thus the pressure of blood in the upper half of the body and thus lead to cerebral œdema. The great frequency of premature births, (40 per cent.) however, which we have shown to occur in eclampsia, is a patent proof of the fact that the disease frequently begins during pregnancy. Also the frequent occurrence of the disease among primiparæ and in twin births, is unexplainable by means of this theory.

The poisoning or "intoxication" theory has, on the contrary, indisputable advantages over the former.

It accepts an intoxication by means of some excrementitial matter, which directly or indirectly is eliminated through the kidneys.

It therefore predisposes a hindrance to the renal secretion, or in other words, a renal disease, which in fact is almost always the case. What noxious substances, when retained, cause this intoxication, it cannot at present be said. That it is neither uric acid nor carbonate of ammonia

is certain. No one at present looks upon this disease as an uræmia in the true sense of the word. Whether we are dealing with a collection of kreatin, kreatinin, or urate of soda—as Stumpf suggests or with acentonæmia, or finally whether we are dealing with still other poisonous substances cannot as yet be determined. The clinical evidence in support of this view is so strong that its correctness is rendered most probable.

Before all, it must be determined as to what form of renal disease must be taken into consideration. Formerly in essaying to answer this question one's thoughts naturally reverted to chronic parenchymatous nephritis. As a fact, this disease can cause eclampsia, but only the fewest cases of eclampsia are due to such a chronic renal trouble. On the other hand, one can also say with correctness, that where chronic nephritis has existed before or during pregnancy, eclampsia only occurs exceptionally (in about ¼ of the cases). In such cases severe œdemas may often occur, such as anasarca, peritoneal or pleural dropsy, often interrupting pregnancy, and still more frequently a detachment causing the death of the fœtus. The mother also not infrequently succumbs at its subsequent birth, after a pregnancy of great suffering, but as has been said in such cases eclampsia occurs with relative rarity.

Especially through the investigations of Leyden and his pupils, we have come to learn that eclampsia is usually due to quite another and acute renal process, in which the principal feature is an acute fatty degeneration of the renal epithelium, in the tubulis contortis. The further results are the appearance of albumin in the urine, usually in an extraordinary amount, and a most severe and acute suppression of the secretion of urine, which is all the more severe since usually both kidneys are affected. If the process occurs gradually, as in chronic parenchymatous nephritis, and especially when one-sided, compensation is established by the action of the other kidney, or of the affected kidneys themselves. In acute disturbances, however, such a result is difficult, the poison is absorbed and the patient is intoxicated.

The rapid course of the eclampsia in favorable cases harmonizes well with the rapid course of the kidney affection in the same cases. No sooner has the eclampsia ceased than in the shortest time imaginable the renal troubles have also disappeared. In two days the amount of albumin will be reduced to a remarkable extent, no matter how large it may have been, and in four to eight days more all traces of it have disappeared. Simultaneously the previously greatly depressed diuresis becomes more free, and consciousness again returns.

The condition of the patient and the function of the kidneys, remind one forcibly of the *stadium asphycticum* of cholera, as in the latter, one may regard the appearances of free diuresis as a probable indication of ultimate recovery.

The proof of the fact that in Leyden's so called "kidney of pregnancy" we are dealing with an acute process, seems to me to be the most important point of the discovery. Now, all can readily understand the acute nature of the entire affection, both the eclamptic as well as the other symptoms.

The next question that comes to our mind is the manner of the development of the kidney symptoms, and their nature. Leyden is of the opinion that the condition is primarily one of acute anæmia, resulting in ischæmic necrosis of the renal epithelia. According to my own opinion the anatomical findings do not seem to accord with this view. On the contrary, apart from the fatty degeneration of the epithelia, the formation of cylinders in the passages of the inner substance of the organ especially, infiltration of the outer substance, and more frequently a hyperæmic condition, at least of the cortex, or outer substance of the kidney.

And now we come to a consideration of a more remote question, or the ætiological moment of the disease.

For a long time the changed pressure exerted upon the various organs in pregnancy has been blamed for these morbid processes, and as a fact good causes for such an opinion exist. The fact that seventy-five or eighty per cent. of eclamptics are primiparæ, and that among these, there are many with firm muscles, and therefore firm abdominal walls, and finally that twin-births and hydramnios are especially frequent in cases of eclampsia (among our 200 cases there were sixteen twin-births, instead of the nominal proportion of two to three)—all these facts seem to elucidate, and indeed to leave scarcely any room for doubt, but that the increased

intra-abdominal pressure plays an important part in the production of the disease.

The theory of Löhlein, Halbertsma, and others, to the effect that this pressure causes a compression of the ureters, and in this way checks the secretion of the kidneys, can assuredly not be set aside or disregarded.

Years ago, Stadtfeld called attention to the frequency of the dilatation of the ureters during pregnancy and parturition, and we have had opportunity enough to frequently verify this fact on the autopsy table. Stadtfeld* found in sixteen parturients, dilatation of the ureters nine times, either of one or both ureters.

In our records of the autopsies of 103 parturients, who died from diseases other than eclampsia, the condition of the kidneys is only referred to in seventy-five cases. In nine of these the ureters were not dilated, in twelve cases the ureter of one side was dilated (ten times the right side and twice the left); in four cases both ureters were dilated, but usually the right more than the left. The dilatation always began at the entrance of the small pelvis. That portion of the ureter lying in the lower or small pelvis was not dilated. Stadtfeld, who observed this, attributed it to a pressure on the ureter by the common iliac artery. In some instances this may be the case, in others it more probably is a pressure between the uterus and the bony ring of the pelvis. The predominence of the dilatation of the right ureter accords well with the frequency of dextro-version, and displacement of the uterus towards the right.†

That, however, the compression of the ureters and the renal disturbances resulting therefrom, constitute the usual, or even a frequent clause of eclampsia, is disproved by the post-mortem findings. Löhline in his thirty-two autopsies of eclamptic subjects found the ureters only dilated in eight cases. We found the right ureter dilated five times, the left once, with simultaneous intense hydronephrosis sinistra, in thirty-seven autopsies on eclamptics. Once we also found a slight hydronephrosis of the right side, but without dilatation of the corresponding ureter.

Here I agree with Schauta, in maintaining, that one most assuredly cannot blame the compression of the ureters with being a frequent cause of eclampsia. It is indeed most improbable that the compression of one ureter, even if continued and causing dilatation, would under ordinary circumstances cause such a disturbance of the renal secretions in general as to produce an uræmic intoxication. On the contrary, we do acknowledge that this may exceptionally be the case, and moreover consider that it was so in one of our cases.

In the case referred to the right kidney was a so-called "cystic-kidney," while the left ureter was considerably dilated, and the hydronephrosis was so intense, that in the report of the autopsy is read that- "the left kidney consisted only of a pyramid." This peculiar and rare complication must have occasioned a considerable disturbance of secretion, which might well have been productive of eclampsia without any other renal disease being present.

I hold that this case is vastly interesting and important, since it proves that a severe disturbance of the renal functions can result in eclampsia; independently of the way or means by which this disturbance, or rather obstruction, is brought about.

When, therefore, the compression of the ureters only plays an exceptional rôle in the production of eclampsia, and the intra-abdominal pressure seems to be a matter of importance, it can be asked whether or not a deleterious pressure is exerted upon the renal vessels. Leyden's views would lead one to think of a pressure upon the renal artery. I have already mentioned that the anatomical findings do not concur with this view, because of the frequent presence of a hyperæmia rather than an anæmia. An isolated pressure upon the artery, without affecting the vein, is scarcely to be thought of, since the two vessels lie so close to one another. A pressure upon the vein alone, or upon both vessels is more probable than upon the artery alone. That it is by no means an anatomical impossibility for the gravid uterus to exert a pressure upon the renal hilus, any one will acknowledge who has, either at autopsies or at laparotomies, noticed how the posterior walls of the soft uterus is flattened against the spinal column and other organs, in such manner

*Hospital's Tidende, June 26, 1861 ; see *Monatschr. f. Geb'k'de,* Vol. XX, p. 69.

†The fact that in 78 out of the 103 parturients, no notice was taken of the condition of the ureters, counts for naught, since many of these were admitted with peritonitis or pyæmia, often not until some time after the birth of the child.

as to seem spread out against the posterior abdominal wall.

The theory has been also advanced that the renal affections are only secondary, and occur after an infection or intoxication through some other channel. According to this view, the kidneys become affected and diseased, similarly as in scarlet fever, diphtheria and other diseases, in that the products of infection are eliminated through these organs, which cannot occur without occasioning a disturbance of the tissue and functions of the organs in question.

The attempts, which have been made by Doléris and others to demonstrate the infectious origin of eclampsia must be regarded as complete failures; and there is no probability of any explanation of the ætiology of the disease coming from this direction.

Then it has been endeavored to reconcile the theory of the products of tissue change (stoffwechsel) in the fœtus, which are absorbed into the maternal circulation, and thus causes eclampsia. This theory was supported by fact that in cases of eclampsia in which the course of pregnancy has not been interrupted; with the death of the fœtus the danger of a return of the eclampsia at its subsequent birth, is removed. This seems right enough, but it seems to me, besides the above, that in every case of eclampsia of pregnancy which has been checked without occasioning the birth of the fœtus, the disease will fail to return at the time of delivery, whether the child is dead or alive. I have seen two such cases (not included in the two hundred cases upon which this article is based), in which the pregnancy proceeded after the cessation of the eclampsia, and ended finally in the birth of a living child.

The one case was that of a duopara, twenty-eight years old, who had four eclamptic convulsions, and five days later, a fifth convulsion, and after the lapse of ten days more, was delivered of a living, although perhaps premature child, weighing 1760 grammes and 44 centimetres in length. The second case was that of a primipara who had thirteen convulsions. These ceased after the hypodermic exhibition of 0.05 gram. morphine, and the patient's consciousness fully returned. Twenty-four hours later labor began, and thirty-four hours after the last attack she delivered a living child.

C. Braun, also, in his work,* saw a living child born fourteen days after the cessation of eclampsia, and after the albuminuria had also disappeared.

In the yearly report of the Obstetrical Department of the Charité Hospital (Berlin) for 1888-89, there are four cases reported by Hensoldt, of eclampsia of pregnancy, in two of which living children were born three and seven days after the discontinuance of the eclamptic attacks, and without causing their removal.

Brummerstädt† has also reported that in thirteen cases of eclampsia occurring during pregnancy, between six hours and twenty-one days later, six dead and seven living children were born; and only in one case did the convulsions, which had ceased for six days, return.

Also the fact already referred to, that eclampsia not infrequently occurs long after the death of the fœtus, only tends further to prove the incorrectness of the theory in question.

So long as it has not been proven, that the death or life of the fœtus makes the least difference, the theory that eclampsia is due to an intoxication emanating from some fœtal secretion, has not the least weight.

I will now turn to a theory recently advanced by Herff‡ regarding the theory of eclampsia. According to this auther eclampsia is due to a peculiar excitability of the psychomotoric centres of the brain —for instance the subcortical centres. This excitability develops during pregnancy through the basis of an inherent psychopathic condition; yet that the physiological irritation produced by gestation does not usually suffice to cause the disease, but is augmented by other exciting causes, notably a slight *uratin* intoxication.

This explanation of the disease, so far as the psychological condition is concerned, seems to us to be an entirely unproven one, although it may seem justifiable to the views of modern neuro-pathologists who always look for some hereditary or neuropathological cause. Otherwise the theory, seems to contain only a round-about description of the facts of the case.

Among the means, which are at the

*C. Braun, *Lehrbuch d. gebh.* 1857, page 489.

†Loc. cit., p. 100.

‡*Münchener med. Wochenschrift*, 1891, No. 5.

service of investigators to enable them to clear away what is obscure regarding the disease, those made use of by Fehling and Stumpf, which deal with an examination of the secretions and blood, seem to us most justifiable. The experiments upon animals which have been undertaken in the endeavor to produce an artificial eclampsia have so far revealed nothing; and if they ever expect to, they must surely be undertaken in some different manner.

At this point, I would take the opportunity to say, that there is an intoxication, which is capable of producing convulsions, such as no experiments upon animals have equalled, and which resemble eclampsia convulsions to the most minute point. I refer to the intoxication, or poisoning producible by bichloride of mercury. The convulsions caused occasionally by this drug, are in every respect exactly like those of true eclampsia. They occur after short intervals, and may be easily mistaken for eclamptic convulsions.

This deception, as a fact, occurred in a case of ours. The patient was a septapara, in whom on account of a narrow pelvis, an abortion was contemplated, and with this end in view a bichloride solution (1 to 15,000) was injected between the fœtal membranes and the wall of the uterus. She was shortly after delivered of a dead child without assistance and eight days later had two eclamptic attacks. The temperature of the patient went up to 40. 30° C., and the pulse 116. The attack was considered to be eclamptic, and it was only the autopsy that revealed the truth. Besides the nephritis, there was diphtheritis of the large intestine, especially intense in the ascending colon. Both kidneys were enormously enlarged or, at a later examination (not undertaken by us) were found to be affected with necrosis of the epithelia, with a deposit of phosphate of lime in the passages of the organ.

The very late appearance of the eclampsia, at the eighth day of the puerperium, proves the correctness of this ætiology.

We can draw an instructive lesson from this case; namely, that in puerperal eclampsias which occur very late, the possibility of a bichloride of mercury poisoning (presupposing that the drug has been used) must be considered. In an exactly similar way, I observed eclamptic attacks in an old woman, which were not but a symptom of bichloride of mercury poisoning. One case, similar to ours, has been reported by Löhlein* The patient was a primipara, thirty-eight, who during the child-birth, had received several uterine injections of carbolic acid solution. Afterwards the acid appeared in the urine, and fifteen days after the birth of the child, the patient had five eclamptic attacks. The patient recovered.

It cannot be denied, however, that rarely cases of true puerperal eclampsia occur some time after delivery. In 1869 I saw such a case. The first attack occurred fifteen days post-partum, and the patient died after the fourth convulsion. The urine contained neither albumin nor cylinders. In the report of the autopsy, both kidneys were described as being in the "second stage of Bright's disease."† A few other cases have been reported by Löhlein.‡

Between this kind of toxic eclamptic convulsions and eclampsia gravidarum there is a decided analogy, which consists in a more or less acute obstruction of the secretion of urine, and it can also occur that both will have the same effect and cause the same pathological process. So, it can be very possible that in searching for the cause of the convulsions in bichloride of mercury poisoning, we may be able to throw additional light upon the cause of the true eclamptic convulsions. In order to tersely express my own theory as to the ætiology of *eclampsia gravidarum et parturientium,* I will briefly repeat what I have said at length in this article:

The disease consists in an intoxication, caused by what as a rule consists in a rather acute obstruction to the functions of the kidneys. The latter consists in the majority of cases in an acute or subacute pathological change in the parenchyma of the kidney, and especially also of the epithelium of the passages in the kidney. More rarely chronic parenchymatous nephritis (morbus Brightii), or interstitial nephritis can be the cause of the disturbed renal secretion; or, it may go as far as a chronic interstitial nephritis, and an acute fatty degeneration, in which case a deleterious result can be occasioned with greater ease. Exceptionally, entirely different changes in the kidneys can give rise to an acute suppression of the secretion of urine; for

**Zeitschr. f. Gebh.*, Vol. VIII., p. 537.

† See Maye, *Dissertation*, Halle, 1869.

‡ Löhlein, *loc. cit.*

instance, in especially favorable cases (such as previously impaired function of one kidney), acute suppression of the secretion of urine by compression of the ureter, and hydronephrosis or a pathological change of the renal parenchyma by toxic substances (bichloride of mercury or carbolic acid). These last add by far greater weight to the theory of intoxication.

If an attack of eclampsia ceased without interrupting the course of pregnancy, then at the birth which occurs later there is scarcely ever a repetition of the disease. That this is due to the death of the fœtus has not been proved.

For the prognosis of eclampsia the possibility of quickly terminating the delivery must be taken into consideration, as well as the number of convulsions and their intensity. A high temperature and a bad pulse indicate the worst possible prognosis.

The *sensu strictori* puerperal eclampsias seem to offer a favorable prognosis, if they occur within one or two hours after delivery. If they occur some time after delivery they offer a most unfavorable prognosis.

Numerous cases of eclampsia (30 to 40 per cent.) occur before any appearance of labor, during the course of pregnancy.

In a very few cases there is a warning or *aura* before the first eclamptic attack, or else it seems that the consciousness of the patient is retained during the first part of the convulsion.

The absence of albuminuria is a most rare occurrence, and also the absence of pathological changes of the kidneys (found at the autopsies) is very rare.

Regarding the therapy, I recommend morphine in large doses and when on account of the small pulse and greatly contracted pupils, no more may be given; then chloral by rectal injection.

In multiparæ the amniotic sac should be ruptured as soon as possible in order to induce, and accelerate the birth of the fœtus. So soon as the size of cervix no longer offers any opposition, the forceps should be resorted to. Version and incision of the cervix, is a practice that should be restricted as far as possible.

In exceptional cases, for the sake of the mother, or if she is moribund, for the sake of the child, Cæsarean section is indicated; but it is never quite impossible to give any precise indications as to when it is justifiable.

TRANSLATOR'S CONCLUSION.

In presenting this most exhaustive and admirable article on *Eclampsia* the translator feels convinced that the REPORTER, has made a valuable addition to the literature on this subject in the English language.

In translating, very little change from the original has been made, other than frequent amplification for the sake of clearness and a weeding out, as far as possible, of abstruse scientific terms, with which the original abounds, and then substitution of plain English. The writer's facile style has been reproduced as closely as possible. The quotations from other works have been verified as far as possible.

The following literature has been made use of in this work:

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STADTFELD, *Monatschrift für Geburtskunde, Vol. XX.*

ON A GENERAL INFECTIOUS COMPLICATION IN LUPUS VULGARIS.

V. Lespinne (*Le Mercredi Mèdical*, 1891, No. 35) believes that there may be produced in the course of the evolution of lupus a special general complication due to absorption of toxic microbes taking place from the surface of the ulcer, this poisoning announcing itself by a sharp increase of temperature, with typhoidal state, catarrhal phenomena of the mucous membranes. This complication may be the signal for the period of invasion of the whole organism, general tuberculosis taking the place of the local tuberculosis of the skin.

HYSTERIA AND FÆCAL IMPACTION IN A NEUROTIC CHILD.

By PROF. CHAS. G. STOCKTON,
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This little patient I have not seen before but I understand that the case is one of fæcal impaction. The history is as follows: H. S., aged 12, born in N. J., entered Hospital Sept. 29; parents, two brothers and two sisters living and well, none dead. The boy says that when a baby three weeks he was sick but his parents have never told him what the trouble was. From this time the abdomen began to increase in size. There is no history of traumatism. The patient can remember that the abdomen was considerably distended when he was four or five, and the bowels were very irregular, passage occurring at intervals of from three days to two weeks, and then unusually, because pills had been taken. After free movement of the bowels, the abdomen has diminished in size. No passage for three or four weeks till the day previous to entering hospital.

It is a good plan always to examine a patient carefully in a general way before beginning the special examination of the region supposed to be affected. The patient is a bright looking boy, though rather neurotic apparently. On raising his hand and arm, he holds the limb elevated for two or three minutes without moving. He lies unnaturally quiet for a child of his age, suggesting the state of trance. There is a peculiar tremor of the eye lids which is quite characteristic of hysteria. Children, even males, we must remember, are apt to be hysterical as well as women. The tongue is coated, rather broad and somewhat indented by the teeth. The gums appear fairly healthy and neither here or else-where is there evidence of anæmia. The breath is exceedingly unpleasant. The boy says his appetite is usually good though he ate no breakfast this morning.

The chest is cone-shaped as it usually is in young children who have punchy abdomens from accumulation of gas or fæcal matter, or from any enlargement of the viscera which causes encroachment on the thorax and stretching out of the lower ribs. If this child should maintain the stretching of his lower ribs until they have hardened from the deposition of lime salts, the chest would remain permanently in this shape. The crooked and variously distended chests which you so commonly see, date back in most cases to infancy and are due to abdominal distention or chronic cough, the result of bronchitis, emphysema, etc., particularly when rachitis is present.

Such an enormous abdomen might be due to distention of the stomach or intestine, to enlargement of the liver or spleen, or ascites. The liver is, of course, pressed upward, even if not enlarged, and we find on percussion that dullness begins just under the nipple. The area of dullness is not extensive, reaching barely to the edge of the ribs, but even there there is resonance due to the condition of the intestine. There is no indication of enlargement of the spleen, by percussion. The abdomen is tympanitic. So there cannot be ascites. The trouble is due to the distention of the intestines or stomach, or both.

Why should fæcal matter accumulate in the intestine of a child of this age? The causes of fæcal obstruction are usually to be studied in connection with the causes of chronic constipation. Chronic constipation in children must be due either to lack of innervation, and therefore loss of motility on the part of the muscular coat of the bowel, or to a lack of secretion, both of which elements facilitate the evacuation of the bowel. At the caecum there is a certain obstruction to the current of fæcal matter in the small intestine, and normally the consistency now increases gradually till it reaches the sigmoid flexure, which is a sort of valve, where the fæcal matter is held until the act of defecation. Sometimes, however, it is retained in the rectum, but normally above the sigmoid. Anything that will for a long time lead to imperfect secretion or imperfect motility of the bowels, will also cause constipation. The trouble more often occurs in the large intestine than in the small, and more often in the sigmoid region than in the rectum. Weakening of the motility of the intestine is a kind of paresis, and it may, in an extreme degree, almost amount to a paralysis. This lack of motility is apt to come about through negligence of the bowels; a person who does not respond to the demand of the bowels for evacuation, blunts the sensibility of the part and leads

to its sluggishness, and this is the most common way in which chronic constipation is acquired. Those who are disturbed in intellect and blunted in their sensibilities generally, are almost always affected with sluggishness of the bowels. The neurotic comes into this class and here we must place this boy. Again, the muscular coats of the intestine may be weakened from inflammation, the mucous membrane secreting less abundantly, and therefore furnishing less lubricating matter for the movement of the intestinal contents. Inflammation of the serous covering of the intestine—that is peritonitis—also causes weakening of the muscular power of the bowels. In chronic enteritis, the normal secretions are changed, mucus may be secreted in considerable quantities, but at other times, even that secretion is scanty. We therefore have diarrhœa followed by constipation, and again diarrhœa. With these cases of chronic catarrh we often find the accumulation of large scybalous masses which cannot be expelled, although around them the thinner fæcal matter passes and there are evacuations of the bowels while the hard masses remain in place. Sometimes these scybalæ become so hard that it is difficult to indent them except with a sharp instrument. This condition is rare in the small intestine, happening most frequently in the transverse colon and sigmoid flexure, but also in the caecum and the rectum. Persons thus affected may say that there is a regular movement of the bowels every two or three days, and on examination we may find the rectum filled with a hard mass, which no power of the the patient can expel, but the irritation may set up an increase of the secretion around it, and thus there will be periodical diarrhœa. This mass should be dug out with a spoon-handle, the spatula, or whatever happens to be at hand, and it may be softened with an emetic of warm water, assisted, it may be, by oxgall or Epsom salts.

In this case, on account of the neurotic element, the child has neglected to empty the bowels and a lack of motility has been developed. From the retained fæcal matter, gas is evolved which he belches up through the mouth. The foul breath and the coated tongue are very natural accompaniments. One would suppose that there would be sufficient toxæmia from the long retention of fæcal matter to make the boy sick but his general condition seems good and he has no fever. I should advise giving him in the first place calomel to stimulate the secretion of the bowel, with it might be given small quantities of ipecac. I should then give him castor-oil in regular doses, perhaps half an ounce every two hours repeated till the bowels are empty. Meanwhile the bowels should be cleaned out from below, by the finger and spoon if necessary, in order to empty the rectum, and following this an enema and then a soft tube should be introduced 24 to 30 inches and a solution of ox-gall ℥ij. to a quart of water should be carried high into the colon. This is usually the most efficient means of softening such a hard fæcal mass.

Note.—Ten days later the boy was presented at the clinic, when he was apparently well. This change resulted from the treatment described to you, with the addition of half a pint of the milk of asafœtida, in divided doses daily.

Further observation showed that the boy was in the highest degree hysterical and, undoubtedly, for his improvement we are largely indebted to the asafœtida.

A NEW VARIETY OF TROPHO-NEUROSIS OF THE SKIN.

Mm. Hollopeau and Larat (*La Semaine Médicale*, 1891, No. 47) describes a condition of the skin characterized by dyschromia and lichenoid eruption. Reference is made to the various dyschromias due to nervous origin which have been described by authors, and to the concomitant phenomena, consisting of disturbances of sensibility and of the vascular system, and disorders of secretion; to which may be added, as shown by a case of the author's, impaired nutrition of the hairs. A case recently observed shows that lichenoid papules may also be produced by the same causes. They make a résumé of their observations as follows: There exists a dermatosis characterized by achromatous patches surrounded by a papular border and by increased pigmentation. This dermatosis is probably a cutaneous manifestation or hysteria. The papules, lichenoid in kind, may be of a tropho-neurotic origin. They are not necessarily akin to pruritus. Cutaneous electrization in the form of bath, with the faradic current, seems to be indicated.

Communications.

DISCUSSION ON ELECTRICAL EXECUTION.*

By A. D. ROCKWELL, M. D.
NEW YORK.

While I do not believe that the best use to which a man can be put is to kill him, yet all will agree that if the law will kill, let it kill decently. It is evident that the sentiment against hanging and in favor of some method quicker and less repulsive is strengthening and that other methods will sooner or later replace the rope everywhere. Mr. Edison while in Paris during the exposition gave his opinion so positively in regard to the efficiency of electricity that the Medical section of the French Academy of Sciences aided by Marcel Duprez, a prominent electrician, have had the matter under careful investigation. There is always opposition and friction attending changes for the better, and this change has been no exception to the general rule. The whole tendency of our civilization is however in the direction of humane methods in dealing with criminals and that form of execution which is quickest and least repulsive should be adopted. It is a mathematical impossibility that any human being receiving in proper form an electrical current of lethal energy should appreciate even for a fraction of a second the slightest pain. It has been ascertained that the brain is one-twenty-fifth of a second in recognizing an impression, and one-twenty-eighth of a second in telegraphing that an impression has been received, and as nerve force travels only about 100 feet a second, while the velocity of the electric current is millions of times greater than this, the brain has absolutely no time to appreciate a sense of pain. As between electricity and certain other methods of capital punishment it is not altogether clear that the former is the best that could be suggested. The guillotine and the garote are practically instantaneous and painless in their action and attended with only a fraction of the paraphernalia and expense of the method now adopted in New York State. There is however an apparent brutality attending both these methods that repels, and a mutilation and shedding of blood, which public opinion in this country seems unwilling to tolerate.

The action of poison is open to none of these objections, and it seems somewhat singular that it has not more strongly commended itself to the philanthropic mind seeking simpler and more humane methods in the legal taking of human life. But as between electricity and the rope there can, it seems to me, be no question. Let us suppose that it had been customary to execute by electricity instead of by hanging, and that some one in the supposed interests of humanity should suggest that the former method be abolished, and the latter substituted; that a method practically instantaneous and painless, unattended by mutilation and without any distressing outward manifestations of pain, be replaced by one which usually fails to extinguish life for ten or twelve minutes, which in many cases it is reasonable to believe is attended with torture, and where the convulsive manifestations are horrible to witness—such a suggestion could not have the slightest claim for serious consideration, and as a matter of fact would never be offered.

After the passage by the legislature of the state of New York of the law substituting electricity for hanging in the execution of criminals, there arose a terrible storm of opposition that apparently had for its basis extensive commercial interests. It was claimed by the opponents of the new method, that electricity was by no means certain to destroy life without the infliction of great pain, and the popular mind was agitated by repeated assertions of the possibility and probability of repulsive disfigurement by the heat and chemical action that would necessarily be developed in the use of currents of such great power. To determine these points and to advise the state as to the best methods of procedure, a commission was appointed consisting of Dr. Carlos MacDonald, Chairman of the State Commission in Lunacy, Prof. L. H. Lady, of Columbia College, and the writer, who both at the Edison Laboratory and at the various prisons of the state, experimented largely upon animals, and tested many devices and methods for the application of the current. There could be no charge of cruelty in these investigations

* Read before the Neurological Section of the American Medical Association, Detroit, June 8, 1892.

for in no single instance was there any evidence that the slightest pain was inflicted.

The largest animals such as horses and a bull instantly succumbed to an electric pressure of one thousand volts, while dogs and calves were as readily destroyed by five and six hundred volts.

But one impact of the current was found necessary, for death was instantaneous in every case.

Immediate examination after the opening of the circuit invariably failed to elicit the slightest respiration or heart beat, and careful and persistent efforts at artificial respiration conducted by Dr. Fell, of Buffalo, with the latest and most approved appliances were without avail.

In view of the fact thus satisfactorily demonstrated that one thousand or at the most fifteen hundred volts would instantly kill any animal large or small, we very naturally inferred that any human being would succumb even more readily, but to make assurance doubly sure, it was recommended that not less than 1,500 or 2,000 volts be employed in the execution of criminals. To our great surprise therefore it was demonstrated at the first electrical execution and confirmed in every subsequent attempt, that it was far more difficult to kill a man by electricity than any ordinary domestic animal however large. In the only execution which the writer attended, when four criminals were successively subjected to the electric stroke, the first contact of twenty seconds with a voltage of 1,700 left its victim apparently lifeless, with the exception of a slight fluttering of the pulse and what appeared to be a slight expiratory effort.

Because of these faint evidences of vitality it was decided then and has been customary since to repeat the shock once and sometimes twice. That the victims were however in every instance so thoroughly devitalized by the first shock as to preclude the possibility of resuscitation, and that every vestige of consciousness was instantly obliterated, admitted of not a shadow of a doubt. In these cases a man's brain acts in two ways and I should say that the reasons for this increased strength of current necessary in the case of a human being were both physical and psychical. In the first place, the man knows what is coming and every nerve and muscle is tense with involuntary resistance. There is a mysterious likeness between nervous force and electric force; not a resemblance exactly, but a something about each which science has yet to fathom.

I have no doubt that this nervous tension operates directly to impede the action of the electricity, while the secondary effect is physical. The body conducts electricity by virtue of its saline solutions.

Now, fright drives the blood away from the surface to the central portions of the body.

When a man is placed in the chair he is necessarily terribly frightened, and the result is that the surface tissues are unnaturally dry, and hence inferior conductors. With an animal these influences do not prevail, but the most striking confirmation of the probable truth of this suggestion lies in the fact of the greater readiness with which life is extinguished in men from accidental contact with electrical energy.

Even where the contact has been incomplete and imperfect, linemen have been instantly killed with electrical potentials no greater than those employed in judicial executions. When a man thus accidentally comes in contact with the current, his will or nervous force is in a passive state and offers no resistance to the action of the current, while the surface of the body is usually flushed with the exertion of work and in the highest state of conductivity. Notwithstanding the efforts of a united press to exaggerate results, no one who has once witnessed a properly conducted execution by electricity can fail to commend it as a most humane method as compared to hanging. Aside from the fact that a human life is being taken by violence, there is little in connection with the execution that is revolting to the senses. After the first convulsive movement as the current is received, every muscle is simply tense and motionless until the current is broken when relaxation takes place and the man is to all intents dead.

It will be recollected that the press raised a great outcry against the use of electricity, not only because of its supposed inefficiency, but because of what was described as repulsive mutilation by burns and scalds. While the degree of heat generated and the influence exerted upon the superficial tissues, varied in the different cases, according to the position

of the electrodes and the density of the current near the points of contact, in no instance was there any such repulsive disfigurement as has been intimated, and in all but one or two the effects produced were so superficial and slight as to be unworthy of comment. It cannot be denied however, that owing to the limited area through which the tremendous voltage required has to operate, and the immense resistance offered to its passage there occurs a remarkable drop in potential and an astonishing development of heat, which, without the exercise of the most intelligent and careful supervision, might result in such severe burning as to bring under public condemnation a method which thus far commended itself to all eye-witnesses.

But it is not voltage alone that kills, but its rate of expenditure in the body as expressed by amperes, and the time consumed in its expenditure as expressed by the volt, ampere seconds indicating the measure of the heat developed during the action of the current. As stated by the distinguished electrical expert, W. J. Jenks: "None of these factors are well settled as yet in their relation to the energy actually required to cause instant and painless death. By death, I mean now not alone cessation of consciousness of a perfectly healthy human being in an interval too brief for thought to measure and the establishment of conditions which produce gradual and final expenditure of the stored nervous energy of the brain and the subordinate centres of distribution of vital force—such as the pneumogastric nerve and the spinal cord—I mean also, total paralysis of all the vital organs and of the nervous centres by which they are directly or indirectly vitalized, and by which the muscles of the extremities are actuated, so that when the current is broken there can be no reflex action of the muscles, such as would indicate the presence of residual life energy, or a possibility of its resuscitation."

The question which physicists must determine is how with a comparatively low voltage the same number of amperes that are expended upon the periphery and therefore in a measure lost—could be made to act exclusively on the centres of life and nervous activity, instantly devitalizing them while leaving no outward manifestations of the terrific power employed. It has been asserted that the subject of executions by electricity is one with which the physician should have nothing to do, and vigorous protests have been made against the propriety of allowing the subject of legal executions to be discussed in our medical societies.

In arguing that the function of the physician is to save life and not to be in any way connected with devices that destroy, it is forgotten that in one of the departments of our art, our noblest efforts are enlisted in taking, for the purpose of saving life; and when death is inevitable the physician is at hand to soften the transition from visible time to invisible eternity. When the law therefore decides that some new and better method be adopted in the disposition of those against whom its heaviest penalty has been decreed, who but he should be selected to advise the state as to the proper technical methods of procedure.

Whatever is worthy in action, is proper in discussion and as one of the advisory commission appointed by my state in the interests of the best methods of execution by electricity, I have felt that our work was never along more truly professional lines or more in the interests of humanity.

THE TREATMENT OF HÆMORRHOIDS.

At a meeting of the Medical Society of London, Lauder Brunton (*Lancet*, No. 3576, p. 583) dwelt upon the influence of cold and over-eating in the development of hæmorrhoids. Mercurials, followed by mild salines, are useful in preventing hepatic congestion. Aloes, in large doses, may conduce to the development of hæmorrhoids by over-stimulation of the muscular coats of the rectum. Small doses, on the contrary, exert a beneficial influence. Hepatic congestion due to cold may be relieved by the application of hot-water bags to the nape of the neck and over the liver. Patients subject to hæmorrhoids should become accustomed to emptying the bowels at night, so as to secure rest in the recumbent posture. When there is much irritability at the anus it is preferable to use a soft sponge and water instead of paper more or less harsh. A pledget of animal wool dipped in hamamelis and introduced into the rectum will act as a mechanical support and as an astringent. In obstinate cases an anal pad may afford great relief.

ACUTE RHINITIS WITH RETENTION OF SECRETION.*

By C. E. PERKINS, M. D.,

SANDUSKY, OHIO.

In taking up a small portion of your time, to-day, I desire to call your attention to a case which has been very interesting as well as somewhat perplexing to me, and I hope that the narration of this case may bring to your minds similar ones which you have met in your experience. And if it does, I would like to ask you to narrate them for our mutual profit, as in trying to find some elucidation of this subject, in text books and articles in medical journals, I have been greatly disappointed. We know that but very few cases, comparatively speaking, of acute catarrhal rhinitis are accompanied with symptoms of sufficiently severe character to lead the patient to consult a physician, but that these do occur in which the diagnosis is very difficult and the symptoms severe, I think will be shown from the following case:

Miss M. K., aged 30, unmarried, consulted me on Feb. 9th, this year; her family, as well as personal history, was negative as to tubercular, rheumatic and specific disease; unless we might be inclined to consider an attack of measles (so called) occurring in January, '91 as a syphilitic manifestation; but I cannot do so as some four or five other members of the family had the same trouble at the same time and all recovered without treatment of any kind. Up to the commencement of this trouble she had been exceptionally healthy and robust, having never required the services of a physician.

In the latter part of October last she was taken with what she considered an ordinary cold. There were the ordinary symptoms of acute catarrhal rhinitis, viz: malaise, dryness and heat of the nose followed by discharge, etc., etc., but she had in addition to all these a severe neuralgia on the right side of the face, which persisted for about a month. Early in December complete stenosis of the right side of the nose developed and the left was partially occluded. At this time there was a swelling across the nose, frontal and nasal pains, and slight epiphora, and there was very little running from the nose and that of a watery character. About these same symptoms continued until just before Christmas when she consulted her physician. I am quite certain that he considered the case as one of nasal syphilis, for he prescribed mercurial inunctions and insufflated iodoform daily. She continued under his care for six weeks. At one time in January she had a hoarseness for one week. The right nostril continued occluded and the left became completely so, although he was adopting rigorous antisyphilitic treatment. Not making any improvement she consulted me on the 9th of February. I found her weak and anæmic and somewhat emaciated. There was complete loss of appetite, and swelling, redness, and pains across the nose.

These pains were so severe as to interfere with sleep; there was complete stenosis of both nasal passages which caused the characteristic voice of nasal occlusion. This, upon inspection, appeared to be due to thickening and infiltration of the turbinated bodies and septum; they were in contact about one fourth of an inch from the anterior nares. Having benumbed the parts with cocaine, I introduced a probe, wound with cotton, beyond this point of contact and brought out some cheesy matter of disagreeable odor. I was unable to get a thorough view of the nasal cavities at that time so I directed her to return on the following day; then I found the œdamatous swelling somewhat subsided and saw that there was a polypoid enlargement of the middle turbinated bodies which acted as a valve to imprison the decomposing material.

This I removed with cold wire snare. And thus opened up a regular cavity on each side, from which I removed at least an ounce of foul-smelling cheesy pus. I might add that this accumulation was above the middle turbinateds so far as I could make out. As the parts were thus opened, and the discharge was enabled to make an exit, it gave rise, by running down into the throat, to a very distressing nausea. This I succeeded in relieving by daily removing these secretions and spraying the nares with a solution of peroxide of hydrogen, "Marchand," one to four of water, and a mixture, taken internally, of pepsin and bismuth; I also prescribed champagne. Under this treatment the

*Read before Ohio State Medical Society at Cincinnati, May 6th, 1892.

patient soon began to improve. She regained her appetite, the stenosis was relieved, fœtor stopped, and she began to gain in flesh and strength, and on the 4th of March I permitted her to go home, some ten miles, to report occasionally; she continued to improve until the 24th of March, when she returned complaining of obstruction in the right nasal cavity. Then I removed the last bit of decomposed mucous, which had become very much hardened; since which time she has remained well. I examined her on the 26th of April and found the nasal cavities as nearly normal as we are accustomed to see them: there was no ulceration, nor was there any perforation of the septum, or anything to suggest to one that a syphilitic process had been going on.

This case has been a very perplexing one to me as far as the diagnosis is concerned. I cannot regard it as syphilitic, as the effect of antisyphilitic remedies was of no avail, but positively hurtful, and the case got well without any of the results, such as perforation of the septum, exfoliation of bone, etc., which we should expect to result from such a severe syphilitic manifestation.

I am perfectly convinced that it was a case where the patient was taken with acute catarrhal rhinitis and as a result of the swelling of the mucous membrane, the discharge was retained and becoming decomposed gave rise to the train of symptoms occurring in the case. There might have been implication of some of the accessory sinuses, but I think that there was not to any extent at least. In looking over the literature of this subject as far as I have had an opportunity, it is surprising how little is to be found. The only contribution is from the pen of Middlemass Hunt, of Liverpool, which occurs in the journal of *Laryngology, Rhinology and Otology,* page 1, vol. 6, there under the head of "Serious Symptoms Arising from Retention of Nasal Discharge," he relates two cases. The first was a girl aged 23, who had had the trouble for a year with complete stenosis of the right nostril. Before coming under his care the case had been diagnosed as one of malignant disease. He destroyed the folds of mucous membrane which held the secretion in the nose, and "scooped out the putty like material." The case resulted in a cure. The second case was a widow aged 45. She had about the same symptoms except that the neuralgic pains were more severe. Her medical attendant had diagnosed syphilis and had salivated her without effect. The same foul smelling cheesy material was found in the nasal cavity of the right side. He adopted the same treatment except that he snared the hypertrophied turbinated valve, as it were. In his cases, owing to the length of time the disease had persisted, the fold which had obstructed the exit of the discharge had become almost the same as granulation tissue, while in mine, from the short length of time, about five months, it was mucous membrane infiltrated with serum greatly resembling true myxoma. His also differs in being unilateral, whereas, mine was on both sides. His conclusion is this, and I quote in his own words: "The sequence of events, in the above cases seem to be as follows: An acute nasal catarrh, extending to one of the accessory cavities, most probably the frontal sinus, with swelling and inflammatory hypertrophy of the mucous membrane. Leading to gradual occlusion of the nostril and retention of the discharge, which gradually filled the nasal cavity, became inspisated, and, through pressure gave rise to pain and deformity. Disease of the antrum is excluded by the cessation of all symptoms after removal of obstruction."

I wish to say that my patient was well before I saw Dr. Hunt's article, but if I had seen it sooner it would have been a great help to me as well as a relief. And now in conclusion, I wish to add that I reported this case more because I have considered it my duty than for any other reason, and I hope it will impress upon your minds that cases do occur where there may be a foul-smelling cheesy accumulation in nasal cavities without syphilis or ulceration of the mucous membrane, notwithstanding what some of our best authorities on nose and throat disease may hold in their writings.

CHLORO-ANÆMIA.

℞ Pyrophosphate of iron (U. S).....1 part.
Distilled water (boiled)..... 5 parts.

Or,

℞ Citrate of iron..... 3 parts.
Distilled water (boiled).....10 parts.

Inject the contents of a Pravaz syringe of either of these solutions under the skin of the gluteal region.

—*N. Y. Med. Abstr.*

VENTRAL HERNIA RESULTING FROM ABDOMINAL SECTION.*

By D. TOD GILLIAM, M. D.,
COLUMBUS, OHIO.

The safeguards against ventral hernia are the slippery and vaulted parietal peritoneum which continually shifts the pressure, the fascia, the interwoven commissural fibres, the arrangement of the fibres of three sets of muscles. The factors contributing to ventral hernia are a roughened and sacculated peritoneum concentrating the pressure, scar tissue which has not the power of resistance of normal tissue, and the disturbance of relations of the parietal components.

In long standing cases with large and pendulous pouch, the viscera become displaced, the mesentery prolapsed, and the cavity properly contracted. This adds greatly to the difficulties of the operation, because the cavity can no longer accommodate the viscera.

The ideal operation would be to restore a smooth, regular peritoneum, and the normal relations of the superimposed structures to enlarge the cavity and to strengthen the visceral supports. This as a rule is impracticable, and the intra-peritoneal operation is fraught with so much danger as to condemn it.

The operation of cutting down to the fascia on one side the median line, reflecting it to an equal distance on the opposite side, dissecting up the muscles from the middle line outward in both directions, overlaping and securing them by suture, is full of difficulties, and while offering many advantages over the direct median section, is not likely to come into general use.

The operation of election must be simple, safe, easy of execution and lasting in its results. A preliminary treatment is necessary to enlarge the cavity, restore the viscera and strengthen the muscles. This will consist in keeping the patient recumbent, regulating the bowels, massage, the Trendelenberg posture, and the use of remedies to combat flatulence. The utmost care is necessary to secure asepis, for the efficacy of the operation depends upon the avoidance of suppuration. The operation will consist in an elliptical denudation of an inch or more in width, around the margin of the hernial pouch, and to the depth of the fascia, infolding of the hernial pouch towards the cavity, and seried layers of buried catgut sutures so as to coapt the denuded surfaces perfectly. The dressings consist of antiseptic gauze held in place by strips of adhesive plaster anchored well down on the sides and tied with tapes over the median line. Over all, the cotton pad and flannel bandage.

*Abstract of paper read before Ohio State Medical Society, May 6, 1892.

ECLAMPSIA AND SEPTICÆMIA.

Loviot (*Nouv. Arch. d' Obstét. et de Gynéc.*, November, 1891, Supplement, p. 482) describes a highly-complex labor where the patient was saved after extreme complications. She was a primipara, aged twenty-seven. Loviot found her in labor at term, and very badly nursed. The first twin presented at the breech; the forceps were applied and it was delivered. Then the patient was allowed to rest for an hour, the pains being very feeble in the meantime. The head presented, the membranes were ruptured, the forceps applied, and the child safely delivered. The twins were males and both alive; there were two placentæ. The patient's previous medical attendant had detected a great quantity of albumin in the urine. Antiseptic solutions were injected. Three hours later the patient had a fit. She was not treated with care; delirium set in and when Loviot was called in, two days and a-half after he had delivered the child, he found her temperature 105°, liquid motion pouring away from the bowel, and fœtid lochia discharging from the uterus. A large slough involved the vulva and a tract of the vagina. The slough was scraped away, several litres of solution of sublimate (twenty-five centigrammes to a litre of water) injected into the uterus, and the raw surfaces powdered with iodoform. The vagina was drained with iodoform gauze. The next day the curette was applied to the uterus, which was drained with the same dressing. At the end of the third week there was slight phlebitis in the right leg, which lasted six days. The patient shortly afterwards left for the country, her health being perfectly re-established, excepting that the urine contained a trace of albumin.—*Brit. Med. Jour.*

INFANTILE PARALYSIS.*

By D. R. BROWER, M. D.,
CHICAGO, ILL.

Polio-Myelitis Anterior Acuta, Essential Paralysis of Infancy or Acute Trophic Paralysis of Childhood is an affection of the spinal cord characterized by a sudden febrile onset, often-times with general convulsions and a paralysis of variable distribution, with a rapid atrophy of the paralyzed muscles, and an absence of sensory disturbance and of disorder of the functions of the rectum and bladder.

Its causation is involved in mystery; while it does sometimes occur in adults, yet it is essentially a disease of infancy, cases occurring most frequently between the ages of six months and four years. There does not seem to be any well marked heredity, but it has an ætiological relation to the seasons of the year, occurring most frequently in the summer months. Dr. Sinkler, of Philadelphia, in an examination of a great many cases, determined that four-fifths of the cases occurred during the hot months.

Traumatic influences have been supposed by some to have an important causal relation. The acute febrile affections not infrequently have preceded the development of this disease.

There is no proof that the disease bears any relation to the processes of dentition. The rapid functional development of the nervous system between the periods of life in which it has its greatest frequency, having probably more to do with its development at this time than any physiological process of the body.

Symptoms.—The clinical history of the affection divides itself into four periods: *First*, the period of invasion, which lasts from a few hours to a week; *second*, a stationary period, which lasts for a week or a month; *third*, a stage of regression of paralytic phenomena, lasting from one to six months, and, *fourth*, a chronic stage of an indefinite duration. The period of invasion begins usually with febrile excitement, the temperature reaching 103° or 104 deg., and sometimes 105 deg. Convulsions occasionally attend the onset, especially in young children; there is more or less pain in the back; vomiting and diarrhœa are not infrequent accompaniments; indeed, this onset presents constitutional disturbances very much like the ordinary febriculæ of childhood, and I know of no means by which its differentiation can certainly be established. I think if we are called to see a patient in this stage of the disease we will very rarely, if ever, apprehend the cause of the constitutional symptoms, but in a day or two the child will be found to be paralyzed in some muscles, or groups of muscles. This paralysis is always rapidly developed; only a part of a limb may be affected, or both arms, both legs, or a leg and one arm may be paralyzed.

The amount of paralysis found to be present in this, the second stage of the disease, always reaches its maximum almost immediately—it possesses no progressive character. The sensibility is almost entirely undisturbed throughout the whole progress of the disease; at the very onset they may complain of pains, but these painful symptoms are of short duration. Reflex function, superficial and deep, is abolished in all the muscles that are paralyzed. The functions of the bladder and rectum usually escape involvement, except during the first few day there may be trouble with both these organs, but whatever disturbance there is in these functions after a few days disappear.

After a certain time the period of regression begins during which the paralysis disappears, except from certain parts in which atrophy occurs. There are certain cases in which recovery may be complete and it has been proposed to call these cases temporary spinal paralysis, but as a rule a certain number of muscles undergo very rapid recovery.

The temperature of the paralyzed limbs is lower than the corresponding sound one, the difference usually being several degrees. The sensibility of the skin of the paralyzed limbs is not impaired. These atrophied muscles will not respond as a rule, to Faradic electricity, but usually do respond to interrupted galvanic currents of sufficient degree of intensity. During this period of atrophy there is arrest of development in the osseous system so that the limb gradually becomes shorter than its fellow, and the difference in size increases with the amount of general growth, hence this difference is greater

*Read before the Illinois State Medical Society, May, 18, 1892.

the younger the patient at the onset of the disease. There is also during this stage, a great tendency to the occurrence of permanent shortening of the muscles and consequent displacement of the parts to which they are attached, deformities are thus produced. Certain muscles of the lower extremities suffer more frequently than others with permanent paralysis, and of these, the antero-external group of the leg, the long extensor of the toes, the tibialis anticus, the superficial extensor of the great toe, and the long and short perinei are those most commonly affected. When the upper extremity is the seat of paralysis, the extensor muscles of the hand are those most frequently paralyzed. Bed-sores, or atrophic ulcerations of the skin are exceedingly rare. Relapses are very rare, and second attacks are almost unknown; but a single instance of this kind has come under my observation. Occasionally, however, the disease occurring in childhood seems to lay the foundation for the development of other spinal affections later in life; lateral sclerosis, posterior spinal sclerosis and progressive muscular atrophy occasionally follow in the adult period.

Pathology.—This disease is due to an inflammation that has its beginning either in the interstitial tissue, or in the parenchymatous tissue of the anterior horns of the spinal cord, and either as a consequence of the essential parenchymatous inflammation, or as a consequence of this interstital inflammation there is destruction of the cells of the anterior horns of the spinal cord, and these cells being motor and trophic in function, their destruction results in wasting and paralysis. In some very severe cases there is a slight local meningitis. The original disturbance of function being very much greater than the amount of degeneration that has been produced, results in the clinical fact that the paralysis immediately following the onset is very much greater than that which is to be present after a few days. The probability is, that this inflammatory disturbance has its origin in the presence in the blood of some pathological germs.

Diagnosis.—As already stated, it is almost impossible to make a diagnosis in childhood of the invasion period; the differentiation of the paralysis depends upon the fact that the atrophy is rapid, that the temperature of the limb is below normal, that there are no sensory disturbances, and the bladder and rectum perform their functions normally.

Prognosis.—Occasionally children die in the acute onset, doubtless without the precise cause of death being determined; beyond this there is no danger to life. The prognosis as to recovery is to be based upon the condition of the paralyzed muscles; if the muscles have not lost their electrical irritability, then there is hope of recovery to a greater or less extent, but otherwise, the prognosis as to recovery is absolutely unfavorable.

Treatment.—The treatment of the acute stage of the disease consists in the administration of antipyretics: Antipyrin, bromide of sodium, salicylate of sodium and ergot, if the disease can be recognized in this stage. When the acute stage is over, then the tonics are indicated, iron, quinine and strychnia in the beginning, cautiously. In some cases cod-liver oil and the syrup of hypophosphites are extremely useful. The most important agent in the treatment of this affection is electricity, and the constant galvanic current should be used as soon as the fever has subsided, and should be made to pass through the seat of the lesion in the cord. The electrodes used should be large, and the current should be mild and its duration should be five to ten minutes. At a later period of the disease, when atrophy of the muscles has set in, the interrupted galvanic current should be used to the paralyzed muscles, of the least strength that will produce muscular response, and each paralyzed muscle or each group of muscles should be made to respond to this electrical stimulus not more than once or twice at each seance. As the muscles improve in tonus, less strength of current will be necessary, and after a time the muscles respond to the Faradic stimulation.

The electricity should be applied by the physician in person, much of the want of success in the treatment of this disease being due to the non-observance of this rule. It is a common experience for me to be consulted by the friends of these patients and when I advise the use of electricity to be told that they have been using it, and it has been of no value; and upon further investigation find that they have themselves been applying the current from a Faradic battery, that was incapable of producing the slightest muscular reaction. It is the rule that the Faradic current will

not produce muscular response, hence its use under such circumstances even by the physician is useless.

Along with the electricity there should be used massage of the paralyzed limbs, and if the nutrition of the muscles does not improve under the stimulus of electricity and massage, then stimulating applications may be made to the surface of the limb, and for this purpose we prefer to use the capsicum plaster; placing around the paralyzed limbs strips of plaster about from ½ to ¾ of an inch in diameter, which are to be worn for two or three days and then renewed, and if after a reasonable space of time, the limbs do not improve under this treatment, then I advise the use of deep injections of strychnine, preferring the nitrate of strychnine as less irritating, using full dose, and giving one injection every day.

This treatment must be persisted in for months, even though but little if any improvement is at first noticed, but even the most unpromising cases will occasionally yield to the treatment if perseveringly pursued. The occurrence of deformities will require appropriate surgical treatment, but should not cause us to stop the use of remedial measures. During the progress of this treatment, the child should be encouraged in every possible way to use the paralyzed muscles, and, of course, every possible attention should be given to the hygiene of the patient, for that condition of living that results in the best general vigor, will be of the most service in correcting this special disturbance of nutrition.

ICHTHYOL IN SORE NIPPLES.

Dr. Oehren (*Therapeutische Monatshefte*, No. 2, 1892) recommends ichthyol in the treatment of sore nipples, and according to the following formula:

℞
Ichthyol.....gms. 4 (3j).
Lanoline.....
Glycerine..... āā gms. 5 (3j¼).
Olive oil.....gms. 10 (3ijss).

The advantages of this salve are: One application causes the terrific pains to disappear, the fissures quickly heal, without it being necessary to wean the child or to use a protective cap. The consistence is such that it is easily washed off after being applied, and at the same time the salve contains nothing that will harm the child.

Society Reports.

CLINICAL SOCIETY OF LOUISVILLE.

Stated Meeting, June 7th, 1892.

The President, Dr. P. Güntermann, in the Chair.

FREE DRAINAGE IN PURULENT PLEURITIC EFFUSION.

Dr. J. M. Krim: In substantiation of the belief in free drainage, I simply want to exhibit a case upon which this was practiced, the patient suffering at the time from purulent pleuritic effusion. I further wish to state that I believe this is the only reliable mode of treatment in all such cases. This girl when seven years of age had an attack of typhoid pneumonia, and about four or five weeks after she was convalescent from that trouble, the left side of the chest began to bulge and swell, with difficult respiration, which continued until it made a considerable bulge right where you see the scar. It was then opened and a small drainage tube inserted, which was allowed to remain for six months. She had some fever and rigors occasionally, but not to amount to anything. The patient is now in very good health, except that there is a little dullness on percussion over that side. She is now about fourteen years of age, and the menstrual function has been established.

Case No. 2.—This is also a case that passed through a siege of pleuro-pneumonia, of about five weeks' duration. About four weeks after he was taken with pneumonia, there was considerable bulging of the right side, with difficulty in respiration, temperature varying between 100° and 103°, and more or less cough. After the respiration began to be more impeded, I used the aspirator and drew off about a pint and a half of dark greenish purulent substance, which gave him considerable relief. In about two weeks it had again filled up and another aspiration was done, and about a half pint of liquid drawn off. In about three weeks it commenced filling up again, cough became more severe and one day in stooping down the abscess broke into the broncha, and he expectorated a great quantity of the material. I intended to put in a drainage tube on No-

vember 10th, and the abscess bursted on the 9th. Patient has improved ever since. It was about nine weeks after the first aspiration before it bursted.

Case No 3.—I am sorry that the subject of this case was not able to be present this evening. The patient is a young lady aged twenty-two years whom I saw about the middle of October last suffering with an acute attack of rheumatic trouble. All the large joints were involved, and she had been sick about two weeks before I saw her. I made a thorough examination, found she suffered with mitral regurgitation in addition to the rheumatic trouble, and she told me she had suffered with heart trouble since the first attack of rheumatism about ten years ago, which has occurred every two years since. Two weeks after she came under my treatment, I found there was considerable œdema on the left side with impaired respiration and complication of the pleura. I thought it was possibly due to some conditional heart trouble. I put her under treatment with salicylate of soda with the hope that it would remedy it, but the side continued to enlarge. I used the aspirator and drew off about a pint of fluid; it was not a purulent matter however, just a plain pleuritic effusion. She recovered from this and about six weeks afterward the right side began to get large. I called Dr. Bailey in consultation and he thought it was probably due to effusion. We used the aspirator and drew off about a pint and a half of purulent substance; it filled up again in about three weeks, and I then used a large trocar inserting a drainage tube through the canula after withdrawing the trocar. The tube remained in about two months draining off everything, and she fully recovered. I cannot understand why it should have been simply pleuritic effusion of the left side, and purulent on the other side.

Case No. 4.—This is a case of tubercular origin. I saw the patient for the first time in March, 1890; there was consolidation of the right lung, temperature varying between 101° and 103.5°. About three months later he had a slight hæmorrhage, from which he made a fairly good recovery. In May, 1890, there was considerable œdema on the right ride; he was aspirated and about a pint of dark greenish purulent substance drawn off. In about three weeks we had to aspirate a second time. On the 3rd of July, last year, we made a resection, taking out about an inch of rib, removing about half a gallon of the purulent material, and the discharge has continued ever since. He is now gaining in flesh and is looking better than he has for quite a while. There is not much tube inserted now, about half or three-quarters of an inch; the opening is gradually closing up; he does not have any hectic condition. I had the discharge examined microscopically and chemically, and the results showed that it was tubercular trouble. The patient is now twenty-six years of age; two sisters have died with tubercular trouble; both father and mother are healthy. You will notice in walking he has a peculiar gait, slightly favoring the right side.

Case No. 5.—There is another case that I want to report, that unfortunately died. It is a case of diabetes; patient had been suffering about six months before I was called. An examination of the urine revealed about ten per cent. of sugar. He had been voiding about six to ten pints of urine in the twenty-four hours. His right side was considerably œdematous, breathing difficult, hectic condition, etc. I aspirated him and drew off about two pints of fetid, dark, bloody looking liquid, and it filled up again in about two weeks. I then used a trocar, inserting a small drainage tube, which gave him considerable relief, but unfortunately the man died in the course of about ten days after drainage was put in, I suppose from gangrenous condition of the lung. I simply wanted to make the statement that I would substantiate all those who advocate free drainage. After the diagnosis had been thoroughly made, I certainly would not attempt a second inspiration, but would use free drainage. It might be modified sometimes, and instead of making a resection, introduce a trocar and rubber tubing through the canula.

DISCUSSION.

Dr. T. Satterwhite: I would like to ask Dr. Krim what kind of a tube he used in the first case he presented.

Dr. J. M. Krim: I used a plain rubber tube. It was open about six months, and discharged I suppose about ten ounces when opened.

Dr. J. A. Ouchterlony: Referring to the case of tubercular trouble exhibited by Dr. Krim, I would like to enquire if

there were any tubercular bacilla in the sputa before the operation.

Dr. J. M. Krim: Yes sir, all the characteristics of tubercular trouble. The discharge, however, did not have any fetid odor until the last couple of months.

Dr. J. A. Ouchterlony: What is the patient's temperature at the present time?

Dr. J. M. Krim: Temperature is about 99°, sometimes a little more, then again normal.

Dr. J. A. Ouchterlony: Have the bacilla disappeared from the discharge now?

Dr. J. M. Krim: No sir, they have not.

Dr. T. Satterwhite: I would like to ask if the patient has any cough at this time.

Dr. J. M. Krim: He has some cough, principally in the morning, and some little expectoration, The discharge is very slight during the day, increasing at night when the patient lies down.

Dr. J. A. Ouchterlony: I regret very much that I did not hear report of the other cases but the one I was fortunate enough to see is certainly exceedingly interesting, and it suggested to my mind some points concerning the combination of pleurisy with pulmonary tuberculosis. We are aware that pleurisy in connection with tuberculosis is quite common, and I would mention in passing that when it does occur, save in the form of plastic, it is generally of a suppurative variety. Under such circumstances not only is it good practice to do as Dr. Krim suggests, to open the pleural cavity and establish drainage, but it seems to me that it affords most excellent opportunity for bringing the anti-tuberculosis treatment to bear in a manner that cannot ordinarily be done, attacking the disease by means of copious washing out with carbolized solutions. I think we should continue to wash out the cavity under such circumstances with carbolized solutions of the proper strength, as long as any remains of the cavity exists. That there are tubercular processes going on in the pleuritic cavity, as well as in the lung itself, is proven by the fact that tubercular bacilli were found.

As to removing a portion of rib in tubercular pleurisy—I do not know that it is entirely free from objections, because it may lay the patient liable to danger of infection of the ribs with tubercular bacilli. My preference in a vast majority of cases of suppurative pleurisy that I have seen would be decidely in favor of using a large rubber tube. Indeed, I have not had a case in my practice within the last ten or twelve years where it has been necessary to resort to the exsection of a rib. I devised a self retaining rubber tube much larger than the largest trocar, by means of which the opening can be kept as fully pervious as desired, and affords a most excellent opportunity for washing out the pleural cavity. The ordinary soft catheter used I do not think sufficient, as a rule, and it has the disadvantage that there is always a possibility that the catheter may slip into the pleural cavity. Such accidents have occurred in a number of cases, and have necessitated the performance of an operation of some magnitude in order to correct them. The tube I have devised has a flange which prevents it from entering the cavity.

Dr. J. W. Irwin: The remarks made by Dr. Ouchterlony seem to be about all that can be said upon the subject. With reference to the operation for removal of pus from the pleural cavity—several years ago I had made by Mr Armstrong an instrument for entering the intercostal space, which is quite narrow. It is very hard to get a canula of suitable size between the ribs. I had made a flat canula and trocar so that I could insert it between the ribs by elevating the elbow as far as it could be elevated, and in that way could get free drainage of the pleural sac very much easier than by ordinary means of aspiration, and I subsequently as Dr. Ouchterlony has just said, inserted a rubber drainage tube allowing it to stick out far enough so that it could not be drawn into the chest.

Now, as to the method of washing out the chest in consumptives—I have had considerable experience in that. I remember one case that I will mention briefly: The patient was a large fleshy man, (in the employ of a brewery), who had inherited consumption, and during the first year of the disease, he developed quite a sac of pus in the pleural cavity and it became necessary to evacuate it. I evacuated it in the manner described, and injected every other day from a pint to a quart of carbolized solution, 2½ per cent. of pure carbolic acid, into the cavity of the chest. He improved for a while very rapidly, and it seemed that

he would get well, but gangrene set in and he became rapidly worse and died. In another case that came under my observation, I used a three per cent. solution of tincture of iodine, injecting from a pint to a quart—it took that much to wash out the cavity—the same results followed as in the case mentioned. In both instances the washing seemed to produce a decided improvement for a short time, but subsequent results hastened death.

Dr. T. Satterwhite: Referring again to the first case exhibited by Dr. Krim: I notice that the opening was made rather high, and think it would have been beneficial if an incision had been made lower so as to have used a syringe from above downward. However, the results show that the child made an excellent recovery. I remember a number of years ago, a child about nine years of age had a very excessive effusion and I made a silver tube with a flange which was inserted and the cavity washed out regularly for two or three months. The child had the most excessive curvature of the spine that I have ever seen, resulting from collapse of that side, but by practicing inflation of the lung it evidently broke up the adhesions and and the curvature entirely disappeared. The second case reminds me of one that I saw some time ago in connection with one of the members of this society: There was very considerable fullness of the right side of the chest, the lower half or two-thirds. A portion of the rib (probably about two inches) was trephined expecting fully as soon as we did so, that pus would gush out, but no pus came. We concluded that we ought to put in a drainage tube but were at loss to know exactly what course to pursue. The next morning there was a very free discharge of pus, I suppose about two or three pints. My idea was that there was no effusion, but that it was an abscess of the lung. There was complete dullness, we could hear no respiration at all in the lower part of the chest, and there was also bulging so we diagnosticated pleuritic trouble. It came on in the way that these pleuritic effusious usually come.

Dr. W. T. Dulaney, (of Bristol, Tenn.):—I have had a little experience with this character of cases, not a great deal, but what I had came thick and fast. I had three cases within eighteen months about the year 1885; one was a very remarkable case, and illustrates the importance of washing and drainage. I will report them briefly:—The first subject was a young man about twenty years of age, very stout and vigorous previous to the attack to which I refer. About the first of January, 1886, he danced all night and soon after took a trip by rail and was subsequently attacked with what his physician (a very good one) called pleuro-pneumonia. I was not called to see him until May—found him suffering with general anasarca, very much swollen all over, could not lie down, breathing was very rapid, pulse over 140, left side of chest filled with fluid, and he was depending upon one lung for respiration. I did not have an aspirator at the time, but relieved his general œdema by puncturing his back, legs, etc., and in a day or two it all drained out. He was then in such condition that I could make a more thorough examination. We aspirated him about the eighth intercostal space behind, and drew off about eight pounds of pus having a sort of muddy appearance. Of course there was immediate relief from the distressing symptoms, pulse came down to normal in less than twenty-four hours. In two weeks, he was as full as ever; we operated again drew off this time about nine pounds of pus. The cavity was thoroughly washed out at each aspiration with carbolized water. Two weeks after the second aspiration he was fuller than ever; we used a trocar this time, but just as we were about ready to operate the abscess broke into the lungs and quite a quantity of very offensive pus come out by way of the bronchial apparatus. Previous to this there had been no odor about the pus whatever. We removed with the trocar about eleven pounds of pus, then inserted a small drainage tube, washing the cavity each day. In the course of two months while under treatment, we calculated that we removed from this patient about seventy pounds of pus. He made a good recovery and is now as strong and vigorous as ever, and is doing hard work as a plumber.

A short time afterward I was called to see a case that another doctor had tapped with a trocar, the patient was a little girl about two years of age, pale, thin, and as poor as anybody could be, financially—I merely mention this to show the surroundings. We used the trocar and drew off quite a quantity of pus and washed it out

thoroughly with carbolized water. The child made a good recovery.

The next case was a boy about eight years old, who had an abscess very low down, in fact, so low that I thought it possibly might be some hepatic trouble. It was on the right side. This child had always been in the habit of having his own way, and would not have it opened for about eight months, but it was discharging a little. The little fellow had become very much reduced, and I did not think he would ever get well. The abscess was opened in front, thorough drainage established, washed out with carbolized water every day, and the patient made a good recovery.

I regarded the first case as a very interesting one on account of the quantity of pus removed. The heart was dislocated, as far to the right side before the operation as it should be to the left in the normal state.

Dr. W. O. Roberts: I have had quite a large experience in the treatment of empyema; have seen only one case of true empyema die after drainage was established. That case occurred in the city hospital and was doing well, when a case of erysipelas was brought into the hospital, and this patient among others became affected and died. In the majority of my cases the trouble has been on the left side. I have seen two cases in which there was spontaneous opening, and in each case it occurred high up in the region of the nipple and would only drain, of course, when the fluid reach a level with the opening, or the patient would lie down. I operated upon one of these patients a few weeks ago. He was a graduate of the University. In this case the empyema was on the right side. An opening was made in the seventh intercostal space, and he recovered without an untoward symptom.

In regard to the removal of a portion of ribs—my rule has always been whenever I can insert my little finger between the ribs, and that is, when there is sufficient space to admit of the introduction of a large sized tube, no interference with the ribs is necessary. But where this cannot be done it is then necessary to remove a section of rip. As to the use of the aspirator, I think the cases reported this evening prove the folly of attempting to treat or cure these cases by use of the aspirator. They invariably refill. The aspirator, I think, is only of use as a means of diagnosis. I believe an opening ought to be made just as soon as pus is discovered. Another point of great importance is the washing out of the chest: The weight of authority is against washing out the pleural sac, unless there is evidence of fetid discharge. As long as the discharge is sweet, it is not necessary to wash out the chest. There is a great deal of danger in washing the pleural cavity when you distend it to any great degree. A number of cases of sudden death have occurred from over-distension of the pleural sac. A point of considerable importance in the treatment of these cases after a tube has been introduced, is the use of an abundance of absorbent gauze, (not cotton but gauze) so that every particle of discharge may be absorbed as soon as it comes to the mouth of the tube. Recovery in many of these cases is delayed by neglect of this provision.

Dr. J. A. Ouchterlony: One reason for using the aspirator is to get immediate relief, when the patient is suffering with great interference either of respiration or circulation.

Dr. J. M. Krim: Concerning resection of the rib—I cannot see anything wrong about this. In all cases that I have treated and others that have come under my observation, I have never seen any bad symptoms or results from resection; still, I am inclined to do just as Dr. Roberts states, and as before mentioned by me, if you can introduce in the intercostal space a large sized trocar and so establish drainage, it might sometimes be preferable to pleurotomy. But I do believe where there is no chance to get a good sized trocar in between the intercostal space, that resection is not going to do any harm.

In regard to washing out the cavity:—In none of the cases I reported to-night was there any washing out done, except in one or two instances where the discharge had become offensive. As long as there was no fetid discharge the cavity was not washed, and all the patients improved very nicely.

Dr. J. A. Ouchterlony: My remarks were especially in reference to the last case exibited by Dr. Krim, which is a case of tubercular suppurative pleurisy. I do not think there can be any doubt that having tuberculous fluid flowing over the porous

structure of the rib, lays it liable to tuberculous infection.

Dr. W. O. Roberts: When it becomes necessary in tubercular trouble, to remove a portion of rib, would it not be a good idea to have the ends of the bone cauterized with the hot iron?

Dr. J. A. Ouchterlony: There is one objection to the removal of a portion of rib that I have noticed very frequently —and I have seen a great many cases of pleurisy, with effusion, both suppurative and non-suppurative—it is this, new bone forms with great rapidity, and the tendency to closure of the opening is very great by the formation of bony material. I have had cases under my care where exsection of a piece of rib has been made, and where the opening has been reduced to a minimum in a very short time. With me the point has always been whether it was not better to resort to the least severe operation if it will do; of course, if it is not adequate to meet the indications of the case, why then remove a piece of rib by all means.

Dr. W. T. Dulaney: Last fall a young man, conductor on a freight train, in Virginia, was shot by a tramp. I saw the patient about six weeks afterward and found the ball had entered at about the seventh intercostal space in front; there was general dullness all over the left side of the chest; he had no bloody expectoration and no cough, nor had there been any, but there was a little bulging at about the tenth rib behind. After consultation with the attending physician, Dr. Butler, we decided to make an incision there and when we reached the cavity, there was a gush of fetid pus, and serum, I suppose about two pints, and, upon enlarging the incision we found that the tenth rib had been broken by the ball passing through it, about two inches from the spinal column. While examining the wound as the pus and serum came out, the hole suddenly became plugged with a substance which looked like dead cellular tissue, or lung. I took hold of it and pulled out quite a quantity of the most effensive material that I have ever seen; it looked to me very much like dead lung tissue. About a double handful of it was removed. We found the ball just outside of the rib deep under the muscles of the back. The patient in the meantime had considerable fever. The wound was thoroughly washed out and the patient put to bed. In a day or two in giving him an enema, we were greatly surprised to see the water come out at the opening in the back. I had some doubts about this being the water used in the enema, so we used some colored water which also came out through the hole. The fever went down and the patient slowly recovered. He had fecal discharges from the opening for two or three months, and especially if they were fluid. The opening finally healed, and the man recovered though with impaired strength and diminished capacity.

Dr. W. O. Roberts: I would like to ask Dr. Dulaney if the material removed was a solid mass.

Dr. W. T. Dulaney: It may have been the result of hæmorrhage at the time the shot was received; it was a speckled mass looking like cells of the lung, in fact it looked like dead lung tissue. The hole was plugged up completely and we kept pulling out piece after piece of the offensive material, and, when we found the fistula, I did not know what was going to become of it. When the fecal discharges were a little thin or fluid, it would just pour out of the hole. I suppose it was the result of some inflammatory adhesions of the transverse colon to the diaphragm, which sloughed through.

DILATATION OF RIGHT SIDE OF HEART, WITH VALVULAR INSUFFICIENCY.

Dr. J. W. Irwin: I want to speak of a case that came to my notice some days ago. A man, a poor looking individual with a hospital shirt on, came into my office one day puffing and blowing, and said he wanted to be examined. He was forty-years of age and evidently had been an Irish laborer. He gave the history of having been at work for the Western Union Telegraph Co., raising a telegraph pole, and while doing so a spike pole that was resting against the telegraph pole with the spike end up, fell on his head striking on the upper portion of the occipital bone, producing some contusion over that region, and considerable swelling but no fracture. There was no laceration of the scalp and the injury did not give him much inconvenience as he continued at work for twelve days. He had some dull pain in his head and some little pain in his chest about the upper and middle third of the sternum; he also complained of some pain

in the region of the heart, of a dull aching character, but not continuous. There was no loss of appetite nor sleep; his digestion was good and when resting he felt comparatively strong. At the end of twelve days the pain in the head grew worse, and he then applied for admission to the city hospital. This occurred, I think, as nearly as I can remember, about the first of October, and he remained in the hospital ever since. On walking about, taking any considerable exercise, his face and lips would become of a purplish color, the veins in the face and neck becoming immensely enlarged, in fact the jugular veins appeared to be one inch in diameter. There was no pulsation nor murmurs in the veins. The veins over the sternum and over the chest were also greatly enlarged. One vein extending from the right inguinal ring to the axillary and sub-scapular veins was very much enlarged and tortuous. Some of the veins in the lower extremities were also enlarged, some of them varicosed. When the patient stooped over, his face, hands, arms, finger nails, and palms became purple in color. When standing erect the face became quite blanched, and the veins normal in size. His pulse was strong and full when standing erect, put when stooping forward the pulse grew very feeble on both sides. When in a stooping position or upon any exertion, he had considerable dyspnœa. He had a hacking cough without any expectoration; he complained of some dull headache at times, which was made worse by stopping over. Exertion also caused his head to ache. I examined the chest by percussion, found increased dullness over the region of the heart, extending pretty near to the ensiform appendix of the sternum. The sound of the mitral valves was short and sharp and heard a little toward the right of the left nipple. When stooping forward the sounds on both sides became muffled, and a faint blowing sound could be heard on the right side. There was no evidence of aneurism. Pressure over the region of the liver caused enlargement of the supra-clavicular veins and also the vein entering the inguinal ring that I have mentioned. The man is not strong, that is, he is physically strong enough, but on taking any sort of exercise he pants for breath. Food improves his condition very much. In other words, in half an hour after dinner he seemed much better, he could walk or stoop without causing any dyspnœa. I gave him two ounces of whisky which had the same effect on him as food. It was evident that both the food and whisky increased the power of the heart's action. I will state here that he gave the history of not being an intemperate man, he took a drink occasionally, said he had been a laborer for thirty-six years. He had never done any very hard work, and to use his own expression, had "never abused himself in any way." Never had any venereal disease. I diagnosticated dilatation of the right side of the heart with insufficiency of the tricuspid valves. Time will not permit my going into differential details. I wish further to say that I had his urine examined and found it to contain a small amount of albumin, but no casts. There was slight œdema about the eyes and ankles.

CASE OF SPINAL INJURY.

Dr. W. O. Roberts: I saw a man day before yesterday, a laboring man, thirty years of age. Last August he was loading a wagon with logs, the wagon was at the time about half full. He says that he was about eight or ten feet from the ground, while standing on the wagon pulling a log up with some kind of rope attachment, the rope broke or gave way, and he fell backward striking on his shoulders; was insensible for only a few minutes. He said when he came to himself he found that he had lost all muscular power of the body, from the neck down. He was seen some little time afterward by a physician and upon examination it was found that he had not only lost all power of motion but also of sensation, from his neck down with the exception of his shoulders and arms. He has remained in about the same condition up to the present time. He can raise his arms up, bend his elbows, but cannot bend his fingers. He has sen sation in his arms, also upon his body on a level with the lower boundary of the axillary space; below this point there is no sensation and no motion. There has not been at any time any ecchymosis or local evidence of contusion or mark to show where he struck the ground. Urine runs from him as fast as secreted; he has no control over bowels; when he has diarrhœa it just trickles from him all the time, and when his bowels are constipated, the nurse has to take the fecal matter away with the

fingers. His intellect is as good as it ever was.

Upon examination I could find no deformity whatever about the spine; between the seventh cervical and the first dorsal he is sensitive to the touch, but not nearly so much so as he was shortly after receipt of the injury. He has four large bed sores, his legs at first were perfectly straight and helpless, but for three or four months the muscles have been contracting until now there is marked flexion at the knee and at the hip, and it is impossible to straighten the legs. Before this occurred he says that there was considerable œdema in both legs; there is no evidence of that now, in fact his legs are very much shrunken. It is a question in my mind as to the nature of the injury, and as to the advisability of an exploratory operation to see whether or not there is any fracture of the lamina and if such can be found, whether its removal or elevation if depressed, would be of any benefit to him. There has been no priapism.

SYPHILITIC ULCERATION OF THE RECTUM.

Hahn (*Deut. med. Woch.*, January 28th, 1892) reports a case of syphilitic ulceration of the rectum in a woman, aged 33; there was also widespread ulceration in the ileum. At the necropsy the mucous membrane was found to be of a blackish green color, and extensively ulcerated for a distance of 16 cm. from the anus, with but few islets of intact mucous membrane; most of the colon was unaffected. In the ileum, at about 1.5 m. above the ileo-cæcal valve, there were eleven large ulcers with thick callous edges, and at 25 cm. above the valve a narrowing of the gut extending over 8 cm. There was amyloid disease of the kidneys and spleen, and also periosteal thickenings over both tibiæ. Anterior colotomy had been successfully performed during life, and there were free evacuations through the opening. The vomiting, however, persisted, and the author would attribute this to the renal disease. Hahn belongs to those who think ulcerative proctitis (occurring almost exclusively in women) is seldom really due to syphilis. After other measures have been tried, extirpation of the rectum and colotomy alone remain. Some cases, when of limited extent, can be cured by the former procedure.—*Brit. Med. Jour.*

Selected Formulæ.

FOR HYPERIDROSIS.

For the treatment of hyperidrosis in general, and for sweating of the feet in particular, Brocq (*Jour. des Maladies Cutan. et Syph.*, April, 1892) believes that the following drugs are of service:

℞ 1. Naphtol..... 5 parts.
Glycerine..... 10 parts.
Alcohol.....100 parts.
M. Sig.—Apply locally twice a day, after which a powder composed of two parts of naphtol and 180 of starch is placed between the toes.

℞ 2. Permanganate of potassium.... 3 grammes.
Talc.....40 grammes.
Subnitrate of bismuth.....45 grammes.
Salicylate of sodium..... 2 grammes.
Rice powder.....60 grammes.
M.

Or,

℞ 3. Permanganate of potassium....10 grammes.
Talc..... 5 grammes.
Subnitrate of bismuth.....25 grammes.
M. Sig.—Either powder to be applied every morning.

℞ 4. Sulphate of quinine..... 5 parts.
Alcohol at 6°.....100 parts.
Tannin..... 1 to 3 parts.
Alcohol at 50°.....250 parts.
M. Sig.—Apply after the feet have been washed, to be followed by this powder:

℞ 5. Salicylic acid..... 3 parts.
Starch.....10 parts.
Pulverized talc.....87 parts.
Pulverized alum.....45 parts.

℞ 6. Perchloride of iron.....30 grammes.
Glycerine.....10 grammes.
Essence of bergamot.....20 drops.
M. Sig.—For two days previously the feet are to be washed with a cold infusion of walnut-tree leaves, and on the third day the above mixture is applied.

℞ 7. Tincture of belladonna..... 25 grammes.
Cologne water..... 120 grammes.
M. Sig.—Two or three frictions per day.

FOR ALOPECIA.

Quinquaud (*L'Union Medicale—Journ. des Malad. Cutan. et Syphil.*, April, 1892) recommends the following topical application:

℞ Biniodide of mercury..... 0.20 gramme.
Bichloride of mercury..... 1.00 gramme.
Alcohol at 90,..... 40.00 grammes.
Distilled water.....250.00 grammes.
M. Sig.—The hair is cut short; then every day, after a good shampoo, the above solution is to be applied, night and morning. In the mean time frictions may be made with a liniment composed of: Balsam of Fioraventi, 100 grammes; camphorated alcohol, 100 grammes; ammonia, 6 grammes. For a general tr-atment the same author advises the administration of cod-liver oil during the first three weeks of each month, and five to six drops of Fowler's solution, per day, during the fourth week. The treatment is to be continued while the hair remains fragile.

FOR CHAPPED HANDS.

The following mixture, according to Baelz (*Med. chir. Centralb. Pharm. Post*, No. 52, p. 1137, *Journ. des Malad. Cutan. et Syphil.*, April, 1892), is of service:

℞ Caustic potassa..... 0.5 gramme.
Glycerine.
Alcohol, of each.....20.00 grammes.
Distilled water.....60.00 grammes.
M. Sig.—After washing the hands with warm water, the mixture is to be rubbed once every twenty-four hours.

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Leading Articles.

THE PROPHYLAXIS OF PUERPERAL FEVER.

Dr. J. Veit, is one of the most recent numbers of the *Berliner klin. Wochenschrift*, essayed to answer this question in the following sentence: "In spite of the value and usefulness of antiseptics, the percentage of women dying from puerperal infection remains high even where no operative procedure has been undertaken; it must, therefore, be concluded that the too frequently resorted, to internal examinations practised by the physician during or after labor exert a harmful effect upon the patient, and in themselves constitute the medium of infection.

Viewing the matter from a similar standpoint, already a large number of eminent obstetricians both here and abroad have raised a note of warning against unnecessary examinations of the genital tract during childbirth.

Litzmann, the German obstetrician, allows the students at his clinic only to make external examinations, finding that the slight loss of practical experience is more than compensated for by the lessening of the death-rate.

The most recent communications from the pens of Credè and Hegar are practically only repetitions of these warnings. Leopold has also come to the conclusion that internal examinations should be avoided whenever possible, and adheres strictly to this rule in his practice. He states from actual experience that the mortality from childbirth can be reduced to a minimum if internal examinations are avoided.

The *Deutsche med. Zeitung* in referring to the subject, states that in cases of normal labor internal examinations can be entirely replaced by careful external examinations, and that the former should only be undertaken when special indications are manifest.

We have touched upon this subject not only on account of its vast importance, but because it has recently been most actively discussed by our European contemporaries; for abroad, as here, it has been the practice of most physicians to make an internal examination as soon as they reach the bed-side. According to these recent investigations, during the period of dilatation of the cervix, an internal examination should only be undertaken under the following circumstances: First, in cases where the condition of the patient is greatly impaired—as in eclampsia, nephritis, fever, bad circulation, etc.; second, in cases where there are local disturbances—hæmorrhage, abnormally painful labor, or an abnormally long period of cervical dilatation; third, in cases where an external examination reveals an abnormal condition—such as the head of the fœtus over the pelvis in primiparæ, or after the rupture of the amniotic sac in multiparæ, an abnormal enlargement of the lower uterine, segment, rupture, lessening of the fœtal heart sounds, or abnormal position of the fœtus.

During the period of expulsion an internal examination is only admissible under the following circumstances: First, in cases of general derangement—such as fever, bad pulse, great excitement, eclampsia, and nephritis; second, in cases of local derangement—such as delayed rupture of the amniotic sac, hæmorrhage, insufficient labor, or retarded delivery; third, in cases of an unlooked-for change in the position of the fœtus, abnormal distension of the lower segment of the womb threatening rupture, lessening of the fœtal heart sounds, and displacement of the fœtal head above the pelvis.

In order to be able to restrict the internal examination of parturients to the above named conditions, it will, of course, be necessary to submit the patient to a careful external examination, and indeed lay greater stress on the latter than is now generally done. It will also be necessary for our obstetrical clinics and schools to give their students more exact data regarding external examinations than is now generally done. This being accomplished, the results of a limitation of the internal examination of parturients will be speedily felt.

TREATMENT OF ABSCESS OF THE LIVER.

Fontan (*Rev. de Chir.*, February, 1892) holds that a simple incision is not always sufficient, even when very large, to effect a cure of hepatic abscess. Scraping of the walls of the abscess was advocated as a desirable addition to incision. The scraping, it was stated, should be done with a blunt curette, guided by the index finger passed into the interior of the abscess. Two cases were reported in support of the author's opinion that such treatment is not likely to cause any serious hæmorrhage, and that it favors rapid and complete cure. In the discussion, Pozzi, whilst granting that the method might enable the surgeon to discover and open a second abscess, said this advantage would not compensate for such probable dangers as hæmorrhage and opening of the biliary passage. Monod considered the method not only dangerous, but also useless. He quoted cases to show that incision followed by drainage would suffice to bring about a cure of the abscess. In one of these cases, however, the ultimate result was not satisfactory. After three unsuccessful exploratory punctures, a fourth made in the intercostal space revealed the presence of pus in the liver. Monod, after removing a portion of rib, made a free incision into the abscess and drainage the cavity. The condition of the patient improved for a time; but subsequently the temperature rose, the diarrhœa became more profuse, and death took place six weeks after the operation. The original abscess, which had been incised and drained, was found at the necropsy to be quite closed, but there remained two other collections—one near the convex surface, the other near the inferior surface of the liver. The presence of one or more other purulent deposits is usually the cause of failure of incision in the treatment of hepatic abscess. Unfortunately, Monod states, it is very difficult to determine the presence of such multiple abscesses.—*Brit. Med. Jour.*

Book Reviews.

DISEASES OF THE URINARY APPARATUS, PHLEGMATIC AFFECTIONS. By John S. Gouley, M. D., Surgeon to Bellevue Hospital, New York. New York: D. Appleton and Co., 1892.

The scholarly attainments of this distinguished New York surgeon have never been shown to greater advantage than in this, his latest book. Every American surgeon is familiar with the thoroughness and depth of Dr. Gouley's professional knowledge, his clearness of expression, exactness of statement, and beauty of style; and those who have valued his previous writings will read this contribution with great satisfaction. The subject is presented in its broadest and most comprehensive aspect; principles rather than technique and methods being dealt with. It may truly be said that this book is a fitting evidence of a long life of usefulness, clinical research and experience. In every page we clearly read that the author has recognized above every other consideration the paramount value of the great principles which underlie the diseases of which he speaks, and that he conscientiously endeavored to trace as definitely as our knowledge will permit the true pathological states concerned in their production. It is this admirable foundation which gives special value to his work.

The term *phlegmasic affection* is his own, and by it he means "a morbid process, one of the local nutritional changes which, when visible and tangible, is ordinarily characterized by heat, redness, swelling, and pain, and which is now believed by many pathologists to be generally caused by microbic invasion. "Another term which will attract considerable attention is *allotrylic affections*, meaning, as its derivation suggests, "morbid states caused by the lodgement of foreign substances in the organism?"

The division the author makes in the general pathology of the urinary apparatus cannot be too highly praised. It is complete in itself, and its application to special diseases of the urinary apparatus is simply perfect. No one can study too carefully this excellent chapter. It is in fact the foundation of all that follows, and if the student gets the truth contained in it firmly fixed in his mind he will have a solid basis for any subsequent pathological considerations which may logically be deduced from the principles here laid down.

Among the special considerations none is more interesting, more valuable and better prepared than the one devoted to cystitis; the remarks upon its treatment being worthy of special attention. The author is a strong opponent of infra- and supra-pubic cystotomy for the relief of chronic cystitis with contracture of the bladder. In these cases he believes that the best method of cure is by hydraulic dilatation of the bladder. Concerning this he remarks: "There is no curative power in rest and drainage of the bladder in the case of cystitis and contracture. * * * The prescription of long rest to the bladder in these cases does not seem rational, since it is well known that the prolonged immobilization of any part so surely leads to its permanent contracture. The muscular walls of the bladder need be exercised in cases of cystitis with contracture which has not become permanent, and this exercise is attainable by hydraulic expansion, which gradually restores the bladder to its normal suppleness and capacity."

In a book like this, every part of which is finished, it is useless to attempt to give more than an idea of its general characters, which has been very imperfectly attempted here. Every surgeon should read it, for we are sure that there will not be disappointment.

THE SUBCUTANEOUS USE OF IRON IN NERVOUS TROUBLES.

Rosenthal (*Pest. Med. Chir. Presse*) advises this method of administration. He has detected the metal in his own urine within thirty to forty minutes after injection. He recommends two preparations: Ferrum peptonitum, produced by adding a solution of pepsin to one of ferric chloride, producing a powder soluble in water, which is given in doses of one syringeful of a 10 per cent. solution every other day; and ferrum oleincum, given in the same dose in a 5 per cent. solution in olive oil. The former is preferable. He recommends this method in delicate neurasthenic individuals, and in the asthenic dyspepsia often complicating anæmia, in which small doses of iron often produce severe digestive disturbances. Unpleasant effects have not been noticed.—*Deutsche Medic. Wochensch.*, No. 30, 1891.

Periscope.

THERAPEUTICS.

THE DRY POULTICE IN THE TREATMENT OF EPIDIDYMITIS.

In the *Journal of Cutaneous and Genito-Urinary Diseases*, Dr. George Emerson Brewer reports the successful treatment of a number of cases of epididymitis by the "dry poultice." This name is given to a dressing of cotton wool applied thickly over the inflamed portion of the organ and extending on to the healthy skin. This is covered with thin rubber tissue held in place by a snugly applied gauze bandage and the whole placed in a suitable suspensory. Pains rapidly subside, the inflammation disappears, and the organ returns to its healthy state.

TRANSFUSION OF SALT SOLUTION INTO PERITONEAL CAVITY IN COLLAPSE.

Johnson-Alloway (*Montreal Med. Jour.*, February, 1892) removed the ovaries of a woman, aged 42. They were non-adherent, nodular, and about the size and shape of a human kidney, stony hard, and attached to the uterus by a short pedicle. Three gallons of a dark brown limpid fluid flowed away from the peritoneal cavity. There was evidence of secondary deposit in the mesenteric glands and elsewhere. Eight hours later the patient was pulseless, restless, sighing, and almost senseless; the shallow respiration became gasping. Johnson-Alloway believed that this condition was probably due to the sudden withdrawal of a great quantity of fluid, which had removed firm and constant pressure from the heart and large abdominal vessels. He accordingly transfused about three quarts of sterilized salt solution (tempereture 110°) into the abdominal cavity through the glass drainage tube inserted at the operation. The patient immediately began to scream and vomit violently. The tube was removed, and the opening closed by firm packs of cotton-wool. In about five minutes the radial pulse became full. Some hours later the abdomen was as flat as when the patient left the operating table. The highest temperature (second day) was 101.5°. The patient left the hospital within four weeks. On account of the rapidity of its action peritoneal transfusion is preferable to hypodermic injections or enemata of salt solution.—*Brit. Med. Jour.*

PILOCARPINE IN THE STATUS EPILEPTICUS.

Dr. Kernig (*La Semaine mèdicale*, No. 11, 1892), was called to a case of a young girl who was suffering from status epilepticus. A subcutaneous injection of two centigrammes (one-third of a grain) of the hydrochlorate of pilocarpine produced copious perspiration, followed by complete and definite arrest of the convulsions. In about an hour œdema of the lungs apparently threatened, together with collapse. Fortunately, these disquieting symptoms disappeared, the pulse rose in force and frequency, and the patient fell into a calm and reparative sleep.

THERAPEUTIC NOTE ON ALOPECIA AREATA.

Bulkley (*Journal of Cutaneous and Genito-Urinary Diseases*, February, 1892) claims for the treatment reported in this paper greater success than other methods have attained in his hands. It is the very thorough application of a 95 per cent. solution of carbolic acid to the bald areas. He makes a small cotton-wool swab, dips it in the acid and lightly paints the affected spot, afterwards gently and firmly rubbing it in for some seconds. The skin is whitened, in a day or two becomes slightly inflamed, and within a week or ten days sheds its epidermal layer. The process may be repeated in two or three weeks; and has never given rise to accident—such as blistering. No larger area than two or three square inches should be attacked at a sitting.

THE DISADVANTAGES OF HOT-WATER BOTTLES.

The custom which so largely prevails mainly among ladies of using hot-water bottles in bed for the purpose of warming their feet, time-honored as it is, cannot after all be said to have had much to commend it. Indeed, there is a good deal more which can be urged against it than can be said in its favor. Ladies who resort to the habit, for habit it soon becomes in the majority of instances, suffer from cold feet, a condition which it is needless

to say does not particularly conduce to the wooing of sleep. But cold feet is a symptom which should not be left to be dealt with at the end of the day; on the contrary, those in whom it occurs should bear in mind that in ordinary health the proper remedy for this condition is exercise. Nothing tends more to cause "cold feet" than sitting about the house all day, or reducing the daily exercise to a minimum amount, either on account of laziness or feebleness of will-power for exertion. Some persons console themselves with the reflection that they were born with cold feet, and on these grounds hold that it was always intended that they should warm them by artificial means, thus ignoring the necessity which exists for exercise. Hot bottles, too, used in this way become a fertile source of chilblains, and, moreover, are not devoid of danger. We heard the other day of two cases in which the ladies using them were seriously scalded by the cork of the earthenware bottle containing the boiling water suddenly popping out. This brings us to the consideration of whether hot bottles should be used at all, and we think the answer should be in the negative. The best way of warming cold feet at night is to clothe them with warm woolen socks or stockings, which may be slept in. By this means the temperature of the feet is gradually raised, and is equably maintained throughout the night without trouble or risk. Another useful plan is to raise the feet on a pillow about two inches above the knee, so as to facilitate the return of the blood through the veins of the limbs.—*Med. Press.*

ANTIPYRINE.

M. B. Martin, in *L' Union Mèdicale*, Nos. 125, p. 565; 126, p. 577; 128, p. 601, adds much to the statements of the uses of this drug as found in the treatises on therapeutics, believing that its antipyretic properties have over-shadowed others equally valuable. It is useful in hæmorrhage, in that it locally will contract blood-vessels, and, indeed, it is an antiseptic. During operations a one-to-twenty, in epistaxis one-to-five, in coryza one-to-thirty solutions are used. It is valuable in laryngeal affections (catarrhs, stridulous laryngitis), asthma, broncho-pneumonia, pleuritic effusions, when given internally. As an anti-galactogogue, ten to twenty grains, several times repeated; for incontinence of urine (should be giving at 9 or 10 P. M.), for diabetes insipidus and true diabetes (up to a drachm daily); for uterine cancer (Cheron); and in dysemenorrhœa it relieves pain. Even the pains of labor are mitigated. Exophthalmic goitre, nocturnal pollutions, pains of tubercular meningitis, hemeralopia, asthma, either essential or of cardiac origin, distress of aortic aneurism, trigger-finger (subcutaneous injection) —all have been benefited; infantile diarrhœas (Saint-Philippe); with cocaine in obstinate vomiting (Struver). Some dermatoses, as urticaria, erythema nodosum, senile pruritus, and other conditions, where exceptional benefit has been obtained, complete the somewhat extensive list. The paper closes with a statement of the accidents that may be caused by this remedy.

ACONITE FOR SCORPION STING.

A correspondent from Durango, Mexico, says that formerly about one half of the children in the city died from the sting of the scorpion, but now nearly all the lives are saved, if taken in time, by the use of the strong tincture of aconite, of which 5 or 6 drops are put in a tumbler half full of water, and a teaspoonful given at frequent intervals.—*Ex.*

ALKALIES FOR THE INFLUENZA.

Based on personal experience, Crerar. in a paper read before a branch of the British Medical Association, fervently recommends potassium bicarbonate as an unfailing remedy for the cure of influenza. The doses administered by him being 30 grains every two or three hours. The advantages of this treatment are summed up by the author as follows: "1. If used before the attack, it prevents the disease. 2. It destroys the power of the disease within twenty-four hours, generally within four or six hours. 3. The strength is conserved, and the convalescence is short and satisfactory. 4. Sequelæ are conspicuous by their absence. 5. The death rate is reduced to a minimum. I have not had any death in more than one thousand cases. 6. It has more power over influenza than I have ever seen exerted by any method of treatment over any other disease, and I have had an extensive practice for upward of a quarter

of a century. 7. If adopted by the whole profession, it would make influenza non-existent in one week. 8. It rests upon a sound scientific foundation." The last two propositions certainly are very sanguincal and rather startling.

A NEW ANTI-RHEUMATIC.

Salophene is a derivative. It is obtained by treating para-nitrophenol with salicylic acid, reducing the nitrophenol by means of zinc and hydrochloric acid into an amide, and acting upon this with acetic acid. Salophene contains about 50 per cent. of salicylic acid, and exists in the form of thin scales, tasteless, inodorous, and with a neutral reaction. It is almost insoluble in cold water, and only slightly so when warmed. Upon the addition, however, of an alkali it readily dissolves. It is very soluble in alcohol and ether. It burns with a smoky flame, leaving no residue. In the stomach salophene breaks up into salicylic acid and acetyl para-amido-phenol. These substances are excreted by the kidney, and can be found in the urine. Salophene, owing to the presence of amido-phenol, is less poisonous than salol. According to Guttmann, it is a valuable remedy in articular rheumatism, given in doses of from four to six grammes a day in pill or in the form of compressed tablets.

MEDICINE.

RECURRENCE OF CARCINOMA OF THE BREAST

Dennis (*Medical Record*, February 27, 1892), in reviewing the conditions that favor the return of carcinoma in the breast, says, twenty-five per cent. of the cases operated upon fail to recur. The recurrence is influenced by the following conditions:

(1) By the period of time from the appearance of the growth to the time of operation, and places the average time at six months, because at this time little or no infection of the neighboring lymphatic glands has taken place.

(2) By the extent to which infiltration has taken place.

(3) By the radical character of the operation. The extensive operation is suggested from the fact that Küster had examined the glands removed in 117 cases of cancer of the breast, and only two cases failed to show no invasion.

(4) By the histological character of the carcinoma itself. Tumors showing structures departing but slightly from the normal are favorable cases, and the more embryonic the structure the greater the liability to recurrence.

(5) By the appearance simultaneously of carcinoma in both breasts. This condition, however, exists only in five per cent. of the cases.

(6) By the personal factors of the individual, such as age, sex, marriage, traumatism, race, etc.

The locality of the carcinoma has a marked influence on the recurrence after removal.

More whites die from carcinoma than blacks.—*Univ. Med. Mag.*

THE PROPER COURSE TO PURSUE WHEN A WOMAN WITH SYPHILIS COMES TO CONSULT YOU.

Professor Fournier has just given in one of his remarkable lessons the line of action to follow when consulted by a syphilitic woman. This varies with the social status of the patient. If *irrégulière*, that is to say a woman who is kept or a prostitute she must be told at once the nature of her ailment so as to put her on her guard against the danger of infecting others if she persists in maintaining relations with them. If on the contrary it is a married woman the line of conduct is much more delicate. To declare rudely that she is affected with syphilis is to risk, if the husband is the culpable one, causing domestic trouble, and separation in the family. If one simply gives a prescription without saying anything, this usually amounts to nothing for she does not fail to instruct herself upon the real nature of the drugs employed and thus learns the truth. Theoretically it is better to place the burden on the husband of keeping from the wife so far as is possible the nature of the disease which she has received from him. The husband must thus be taken into the case and entrusted with the direction of the care to be taken and the carrying out of the treatment. For this reason Professor Fournier does not advise giving the patient at the first visit a prescription which could awaken suspicion. A local

treatment without mercury should suffice, the patient must be told that there are certain points in the case which do not appear quite clear, and for which reason a conversation with the husband will be necesary, or that there are certain things you wish to recommend to the husband, and ask to have him sent to see you. If the woman is innocent, that is to say if she has had relations with her husband alone, she will readily comply with your request. From this time on you have only to come to an understanding with the husband keeping as much as possible from the knowledge of the wife the real nature of her complaint. However too much secrecy cannot be expected, for after a certain period of this prolonged and mysterious medication the woman begins to suspect the truth, but the object has already been attained, scenes of violence have been avoided which in the commencement would have been precipitated by a sudden discovery of the true nature of the disease and usually regrettable separations and divorces are avoided. But to act as we have suggested we must be quite sure of our premises. We must be assured that it is from the husband alone and not from some other that the contagion has come for in the opposite case it would be the same as saying to the husband "your wife has syphilis and as you haven't it, she must have contracted it from some one else." So as not to commit such a blunder care must be taken in speaking to the husband before having the full assent of the wife. If she is innocent she will have no reason to oppose the conference, if she is guilty, that is to say if she has had relations with other persons she will without doubt take you at once into her confidence.

SUPPURATION DUE TO PNEUMOCOCCI.

R. Condamin (*Lyon Mèd.*, February 7th, 1892) records a case of multiple suppuration, consecutive to a suppurative otitis, which presented characters different from those usually observed. The ear mischief developed suddenly during the course of influenza, and rapidly culminated in perforation of the tympanum, having been preceded by severe sore throat. Two days later the patient's temperature was high, and he had several rigors. An abscess developed on the dorsum of his left hand, which was opened two days afterwards. From this time a series of abscesses in different parts of the body, all subcutaneous and running a rapid course, developed. From fifteen to eighteen at least of these were observed, and in each case cultivations from them revealed the pneumococcus of Fraenkel in a state of purity. The common character of all these abscesses was their quiet development, without acute pain—in fact, they behaved after the manner of "cold" abscesses. The pus was very thick, yellow, and odorless; there was little tendency towards diffusion, each collection tending rather to become encysted. The rapidity of the disappearance of each after being opened by the thermo-cautery was most striking.—*Brit. Med Jour.*

SLOW PULSE.

Among the causes of slow pulse, Dr. D. W. Prentiss enumerates the following, saying that the causes which produce slow pulse may be classified as follows:

1. Diseases or injuries to the nerve centers, producing either irritation of the pneumogastric or paralysis of the sympathetic (accelerator) nerves of the heart.
2. Diseases or injury of the pneumogastric nerve, increasing its irritability.
3. Disease or injury of the sympathetic nerves of the heart, paralyzing them.
4. Disease of cardiac ganglia, by which the influence of pneumogastric nerve preponderates.
5. Disease of the heart muscle (degeneration), whereby it fails to respond to the normal stimulus.
6. The actions of poisons, as lead or tobacco, either on nerve endings or centers. The poison generated in salt fish.

Also the poison of certain febrile diseases, algid pernicious fever.

Another possibility is *malarial poisoning.—St. Louis Medical and Surgical Journal.*

CYSTIC DISEASE OF THE KIDNEY.

After reporting such a case recognized during life, Stiller (*Berl. klin. Woch.*, March 7th, 1892) discusses the diagnosis of this affection. Of the first importance is the recognition of a tumor of renal origin. This tumor appears clinically to be a solid one. Owing to the considerable

stretching of the capsule over the cysts no fluctuation is obtained; on the other hand if the cysts are insufficiently stretched, no tumor may be felt. Cysts in the liver not infrequently co-exist (in 18 out of Lejars' 62 cases). Fluctuation is not recognised in them even when unevenness of the liver surface can be made out. The age of the patient and the behavior of the disease is against carcinoma. The long duration of the disease almost without symptoms is against suppurating kidney such as is found in case of calculus, tubercle etc. Hydro- and pyo-nephrosis, or hydatid of the kidney, yield fluctuation. The sudden onset of uræmia and anuria in a patient previously without renal symptoms and who has a renal tumor, is in favor of cystic disease. A paranephritis may occur owing to rupture of the renal tumor. The fact of the tumor being bilateral is in favor of this disease, but clinically this is not usually recognized, although at the necropsy both kidneys are much more frequently found to be affected. The urine is usually abundant and limpid, with little albumin. The character of the urine is however only of value in the presence of other signs of the disease. The diagnosis is important, for among other things, extirpation of the kidney is contra-indicated, because the disease though clinically unilateral by far most frequently exists on both sides.—*British Medical Journal.*

NEURASTHENIA AND HYPER-ACIDITY.

The *Medicinisch-Chirurgische Rundschau* reviews an article by A. Pfannenstill of Stockholm in the *Nordiskt Med., Ark.*, on the connection between the above-named two conditions. Neurasthenia and nervous dyspepsia are, according to the writer, as frequently seen in Sweden as in other parts of the world. A valuable addition to the ætiology of these complaints is that all the cases observed by Pfannenstill belonged to the working classes, so that neurasthenia is certainly not confined to the upper classes of society, who are most exposed to the excitement of modern life. Of both complaints a primary and secondary form can be distinguished; but the latter, which is merely a symptom of other affections, especially hysteria, is much the more frequent. Hysteria is more often observed in connection with a general neurasthenia, in which the functions of the secreting nerves are always disturbed, and we may find in consequence hyper-acidity and hyper-secretion, or subnormal acidity, or even an entire absence of acid. The hyper-acidity is entirely due to an increase of hydrochloric acid. Pfannnenstill considers that this hyper-acidity is the result of an increase in the quantity of the gastric juice, and not merely of the hydrochloric acid, and that there is no decrease in the power of absorption. Increased secretion of gastric juice is probably the source of hyper-acidity in other affections of the stomach, and the reverse is probably equally true.—*Lancet.*

SO-CALLED GONORRHŒAL CYSTITIS.

Du Mesnil (*Virchow's Archiv*, Bd. cxxvi., Heft 3) proves that there is no specific gonorrhœal cystitis, the presence of gonococci in urine withdrawn by catheter being due to the back-flow of pus from the urethra into the bladder. Moreover, these organisms do not cause decomposition of the urine, so that their occurrence in an ammoniacal specimen does not imply that they were the cause of the change. It is probable that the activity of the cocci is hindered, if not entirely destroyed, by the urine.

CONTRIBUTION TO THE DIAGNOSIS OF TUBERCULAR MENINGITIS.

A well-built and well-nourished man of 40 became comatose at the moment of entering the hospital on foot, and so remained until death, two days later. There was rigidity of neck and spine and total absence of reflex irritability with the exception of the knee reflex. Pulse 80, R. 32, T. 99°. A diagnosis of meningitis was made. On further examination a moderate empyema of the right side was found. The pus was found to consist of fat globules almost entirely. As F. has pointed out, this is of itself almost pathognomic of a tubercular empyema, even without the demonstration of tubercle bacilli. Cultures demonstrated the absence of pyogenic germs. Autopsy showed a most extensive tubercular meningitis, both miliary and solitary nodules being extremely abundant. Tubercular foci were found in both lungs and supra-renal cap-

SENSORY AND VASO-MOTOR DISTURBANCE IN FACIAL PARALYSIS

"Dr. Frankl Bochwart, in an investigation into the conditions present in twenty cases of facial paralysis, found that in three there were disturbances of sensation and of the vaso-motor functions, in five of sensory functions only, and in two of vaso-motor only. The sensibility was only affected to a very slight degree, and sometimes the mucous membrane on the tongue and inside of the cheek was affected, and sometimes it was not. Occasionally also taste was affected. These sensory phenomena disappeared much earlier than the paralysis, but in one case in which the paralysis persisted there was diminished sensibility even after several years. The conclusion sought to be drawn from these facts is that the facial nerve in man contains some sensory and vaso-motor fibers; but of course it would first have to shown that the fibers of the fifth nerve had not also suffered when the facial nerve became affected."—*Lancet.*

HEPATITIS PARENCHYMATOSA BENIGNA.

S. Tama draws attention (*Nederlandsch Tydschrift v. Geneeskunde*, November 14th, 1891) by a series of cases to a well-defined form of parenchymatous inflammatory affection of the liver, which as a rule runs a favorable course. Talma regards the hepatic symptoms as secondary to an intestinal lesion, the liver being infected by way of the portal or lymphatic system, the latter being the more likely path. The affection may occur at any age; its onset is always marked by severe vomiting, accompanied either by constipation or diarrhœa, and in the course of a few days, varying from one to five, hepatic enlargement and tenderness are developed, respiration becomes purely thoracic, and the symptoms increase with or without a rise of temperature (in the severe cases the temperature rose to 104° F. in two, and to 102° in two other of the recorded cases), and the patient becomes extremly weak. The diarrhœa and vomiting cease in a few days, the urine is usually dark colored, and may contain a variable quantity of bile pigment, and there may or may not be slight jaundice. The hepatic enlargement is general, though circumscribed enlargements or bosses may occasionally be detected on the anterior surface, which may be as large as a hen's egg; their presence may mislead the medical attendant into the diagnosis of cancer or even abscess of the liver. Jaundice is seldom present, biliary obstruction or suppression is rare, and ascites has never been observed. The spleen is always enlarged, but diminishes in size as the patient improves. The symptoms in the less acute cases gradually disappear in about ten days or a fortnight, and recovery is generally speedy and uninterrupted. Hepatic nodules were found in two cases. Death resulted in two of the recorded cases. In one of these (a child aged 8) the spleen was *post mortem* found to be enlarged and firm in density the mesenteric glands and the portal and hepatic lymph glands were enlarged; there were no signs of recent or old peritonitis. The liver was much enlarged and very firm to the touch (weight 3,000 grammes). On the upper surface nodules were to be seen, regular in outline, with broad bases rising gradually from and merging into the surrounding hepatic tissue; on section there appeared to be no abnormality either in the liver or nodules, which latter were of the same density as the surrounding structures. Microscopical examination revealed an apparent increase in the quantity of the inter- and intra-lobular connective tissue; the liver cells appeared normal, and careful investigation of numerous sections displayed no further abnormalities.—*Brit. Med. Jour.*

PYREXIA AND ANTIPYREXIA, NERVOUS AND ARTIFICIAL.

Richter, in the *Brit. Med. Journal Supp.* (Inaug. Diss. Breslau, 1891), gives an account of some experiments made by him on pyrexia and antipyrexia. He first of all discusses the mechanisms by which the temperature can be lowered and concludes, as a result of calorimetrical experiments upon animals in which fever had been artificially induced by the injection of infusion of hay, that fever consists in a shifting of the heat-regulation mechanism. He therefore adopts Filehne's theory of fever. The difference between a nerve temperature and fever is next discussed and the author does not believe that there is in the brain any heat center, damage of which can cause fever. He regards the pyrexia which may be brought about by

damage to the corpus striatum, as quite distinct from fever, being only a temporary disturbance of the heat-regulating mechanism.

SURGERY.

CASE OF TUMOR OF THE PONS.

Dr. P. Watson Williams (*Bristol Medico-Chirurgical Journal*, Sept., '91.) A boy, aged six years, slightly hydrocephalic had for a time been observed to be growing tiresome and fretful. Occasionally he would tumble about and fall forwards, or go around like a toy, and then fall. Subsequent examination showed the face drawn to the right, internal strabismus; pupils large and inactive; left optic disc blurred, and gait unsteady. These symptoms became more marked. The left leg at times dragged, and later became partially paralyzed. Weakness and twitching of right facial muscles appeared and paralysis of the right sixth nerve. His irritability increased and there was a steady failure in strength. Vomiting only occurred twice. Then followed weakness of left arm, and later paralysis, dribbling, exaggerated left patella, tendon, reflex, and finally death from exhaustion. On autopsy the whole of the pons was found involved in new growth, being much swollen on its anterior surface and bulging above in the fourth ventricle. Both crura cerebri were likewise enlarged by the extension of the growth and the nerves in relation with the pons distorted and compressed. The third nerves of both sides were flattened and displaced, and the sixth nerves wound round the bulging posterior border of the tumor, especially that on the right side. The tumor proved to be a typical glioma.

OPERATIVE TREATMENT FOR RAPID CURE OF DACRYOCYSTITIS.

Guaila's (*Centralblatt für praktische Augenheilkunde*, January, 1892) operation is performed in the following manner: The patient sits on a chair with his head slightly bowed forward, and held in this position by an assistant; the sac is then incised from the outside, and if there is much bulging of the skin, a small oval piece is removed, together with the fistula, if one should be present. The blood does not get into the patient's throat, as happens when the ordinary recumbent posture is adopted. One then scrapes out the entire inside of the dilated tear sac, being especially careful to remove any diseased bone met with, and having mopped out the cavity very freely with a solution of sublimate of 1 in 5,000, a bone cannula (to be described below) is inserted and the wound stitched up. The cannula is certainly a novel feature of this operation; it is made by decalcifying with hydrochloric acid, 5 per cent., the bones composing the posterior limbs of large toads, divided into the proper lengths, and hardening and preserving them in a mixture of alcohol and sublimate. The knob-like end of the bone at the joint prevents the cannula slipping into the nose too far. This procedure has given excellent and apparently permanent results in the 314 cases the author has used it in.

REMARKS ON THE TREATMENT OF TRACHOMA BY THE EXPRESSION OF THE MORBID SUBSTANCE WITH A ROLLER FORCEPS, BASED ON A SERIES OF 114 CASES.

Dr. H. Knapp, (*Archives of Ophthalmology*, Vol. xxi, No. 1.) refers to the method for the ordinary treatment of trachoma as being unsatisfactory and tedious. He gives a wood-cut of his roller forceps and describes his method of using it.

Of the 114 cases treated there were 16 cases of follicular catarrh, 64 cases of follicular trachoma, 22 cases of diffuse trachoma, 10 of cicatricial trachoma, and 2 cases of horny summer granulations.

Of the 16 cases of follicular catarrh, fifteen were cured. Fifty-four of the cases of follicular trachoma were cured, and of eight no record was given, but a cure was believed to have occurred. Of the 22 cases of diffuse trachoma, seventeen was cured, three did not report after treatment, one had a relapse, one had an attack of acute conjunctivitis six months afterwards, but no return of the granulations. Knapp states in reference to his forceps: "The newer instruments have conical pivots which dip into corresponding depressions. Tiemann & Co., proposed also to make an instrument with longer limbs of the stirrup and a set screw to remove and cleanze the pivots and sockets. At my suggestion they made the branches a little longer somewhat elastic so that the roller can be removed and reinserted."

sules, though no symptoms of Addison's disease were present. This case shows the diagnostic importance of a væteriological and microscopic examination of empyematous matter.—*Prof. Frænkel, Berl. Klin. Wochensch.*

OBSTETRICS.

PERINEORRHAPHY DURING PREGNANCY.

Weil (*Prager med. Wochenschrift*, 1892, No. 11) reports an interesting case of laceration involving the sphincter and recto-vaginal septum, in which he operated in the fifth month of pregnancy, the patient being delivered at term without injury to the perineum. He regards the operation as justifiable during pregnancy when the patient is rapidly losing her strength from diarrhœa, so that abortion is imminent, and suffers severely from the loss of perineal support. The danger of infection during labor, by reason of the communication between the rectum and the vagina, is to be borne in mind. Care during the delivery of the head, with the performance of episiotomy, ought to prevent a second laceration.—*Amer. Jour. Med. Sci.*

TREATMENT OF ASPHYXIA IN NEWBORN CHILDREN.

W. E. Forest (*N. Y. Med. Rec.*, April 9th, 1892) objects to the Schultz method of artificial respiration in infants (supplement February 28th, 1891), that is too violent, and that it must lead to great chilling of the surface, which may be sufficient to determine the death of the child. He suggests the following method:—The child is laid for an instant on its face, with the head and thorax lower than the pelvis, and quick but gentle pressure is made on the back; this is to expel fluids which may have been drawn into the air passages. The child is then placed in the sitting posture in a pail containing warm water in sufficient quantity (about 6 or 8 inches) to rise a little above the level of the heart. The water should be as hot as can be borne comfortably by the operator's hand. The left hand grasps the wrists with the palms outwards, the right hand supports the back, the head resting between the thumb and fore-finger. The thorax is placed in the inspiratory posture by carrying the child's hand upwards until it is suspended by the arms, the buttocks just raised from the bottom of the pail. Forest contends that in severe cases, in which alone artificial respiration is really required, this will not be sufficient to cause air to enter the lungs since the air cells have never been distended, and cannot be distended merely by placing the chest in the inspiratory position; his method, he maintains, enlarges the thoracic diameters to their maximum, and should be combined with direct insufflation. When the arms are raised the head falls backwards, and in this position, he says, the œophagus is closed; the operator blows into the child's mouth while still holding it in this position, and so completes inspiration; expiration is effected by lowering the child's arms until the left hand of the operator rests against the front of the child's thorax; its body is then doubled forward, and gently compressed between the two hands of the operator. The main advantages claimed for the method are that it is gentle and effectual, but especially that it provides for maintaining the body-temperature, and so favors the re-establishment or maintenance of the circulation.—*Brit. Med. Jour.*

GYNECOLOGY.

REMARKS ON THE OPERATION OF EXCISION OF THE BREAST AND ITS AFTER-TREATMENT.

Gould (*Lancet*, London, 1892, vol. i., No. 8) speaks of certain special points concerning this operation. In the matter of the direction of the incision, the author states that two considerations only should guide the surgeon. The first is imperative and has to do with the complete removal of the nipple and skin over the tumor, when that is malignant. The second is to have the cicatrix parallel to the fibres of pectoralis major. In most cases both of these objects are best attained by the same incision—one enclosing an ellipse of skin parallel with the anterior fold of the axilla when the arm is at a right angle with the trunk. It is stated that it is sometimes convenient to prolong the incision into the axilla, but never necessary, as the axilla can be readily reached from any incision for amputation of the breast. The writer

has thoroughly cleaned out the axilla in two cases of scirrhus of the breast, through an elliptical incision over the gland, the long axis of which was vertical.

When the mamma is not the seat of malignant growth, it is recommended not to invade the axilla, and even in cases of sarcoma the axillary glands are not to be removed unless affected. In cases of carcinoma, however, the glands should be removed from the axilla, together with the mass of fat in which they are situated. The intercosto-humeral nerve should be preserved.

Bleeding vessels are caught with pressure-forceps as fast as they are cut. At the conclusion of the operation the forceps are carefully removed. Occasionally one or more arteries will require twisting. A ligature is never necessary. Sponges are used only to dry the wound and are never to be rubbed over its surfaces. The less they are used the better.

The wound is to be thoroughly flushed with bichloride solution 1:2000. A continuous suture of fine chromicized catgut is recommended, each loop being caught up—the buttonhole stitch. A drainage-tube is not to be employed. The dressing should be aseptic and it should secure accurate apposition of the wound-surfaces. The author uses four layers of boric lint to lay over the wound, the margins extending an inch beyond the wound in all directions, This is held in place by strips of plaster two inches wide. Over this, gauze or wool is applied, and held in place by a roller bandage carried around the trunk in an ascending figure-of-8. The arm is held to the side by means of an ordinary chamber-towel. The towel is folded lengthwise, and between the two folds the forearm and arm are placed, the hand being just within one end. The towel is then fixed in place by pins.

During the first twenty-four hours a firm pillow placed under the arm of the affected side may relieve the usually distressing backache. After the first day the patient may be raised to a sitting position by pillows or a bed-rest. The dressing may be removed on the seventh day, when the stitches may be carefully taken out. The wound is re-dressed by two layers of sublimate gauze, fixed with collodion, and over this a light boric lint dressing held with the roller bandage.—*Amer. Jour. Med. Sci.*

DEATH AFTER INTRAUTERINE INJECTION OF PERCHLORIDE OF IRON.

H. Pletzer (*Centralbl, f. Gynak.*, May 7th, 1892) publishes the following case which occurred in Bonn last winter. A woman, aged 32, was admitted on November 10th, 1891, for retroversion and chronic endometritis. In 1881, after contracting syphilis from her husband, she had a stroke of right hemiplegia, and the right extremities retained traces of paralysis when admitted. She had borne seven children, five macerated or premature; the retaining two died when about two weeks old. On November 11th, 1891, the curette was freely used and the uterine cavity was afterwards painted with tincture of iodine; a Hodge's pessary was also applied to relieve the anteflexion. On November 16th and 18th the uterus was washed out with a 2 per cent. solution of carbolic acid, and iodine once more applied. The period began on November 20th and lasted till the 26th. The uterus was then treated every two days as before. As uterine hæmorrhage set in, it was thought advisable to inject iron. About ½-drachm of the liquor ferri sesquichloratis (which is 10 per cent. weaker than the liq. ferri perchlor. fortior *B. P.*) was carefully injected into the uterus after previous syringing with the carbolic solution. The syringe had lateral holes, and free escape of the injection was ensured by means of a Bozemann catheter. Then the uterus was washed out once more with the carbolic solution and the patient put to bed. The injection of iron caused pain at the time. Fifteen minutes later colicky pains set in. Pletzer was called back and found the patient livid, breathing, stertorously, and complaining of severe hypogastric pain. In spite of all kind of treatment the patient grew worse and died two hours and a quarter after the beginning of the alarming symptoms. An old lesion was detected in the left thalamus opticus. Small clots were found between the trabeculæ in the right heart, and soft, non-adherent clots in the pulmonary veins. A large coagulum was discovered in the right internal iliac vein. There was a distinct breach of surface on the inner wall of the uterus, with strong evidence that through it the iron had entered the veins. Pletzer refers to Cederskjold's similar case, where the uterus was in a state of subinvolution.—*Brit. Med. Jour.*

PEDIATRICS.

INVASION OF THE SUBCUTANEOUS TISSUE BY THE DIPHTHERIA BACCILUS.

In three out of four cases of diphtheria Spronck (*Centralbl. f. allg. Pathol.*, January 1, 1892) found the characteristic bacillus in the œdematous tissues round about the tracheotomy wound. After laying open the trachea in rabbits, the author inoculated it with the bacillus of diphtheria, and then closed up the wound. Œdema often appeared round about the wound, and the same bacillus was found in it. Sometimes the œdema was very extensive as if a suitable soil had been provided. Rabbits showing this œdema died more rapidly than the others. The invasion of these tissues by the bacillus is signalized by this œdema. When the trachea is opened its movements favor the penetration of the micro-organisms, and subsequent cleansing may be insufficient to remove them. The toxalbumin produced by this bacillus is more readily absorbed from the subcutaneous tissue than from the surface of the mucous membrane. The author points to the probability that a patient's life may be thus endangered, and refers to cases where death ensues two or three days after tracheotomy, and no sufficient cause is found at the necropsy.—*Brit. Med. Jour.*

SYMPTOMS PRODUCED BY ADENOID VEGETATION IN YOUNG INFANTS.

Lubet-Barbon (*Mal. de l'Enf.*, Paris, 1891, Nov., 499.), reports that in a child of one month the symptoms presented were that it could not breathe while nursing, and while nursing was frequently seized with attacks of coughing. It did not gain in weight, breathed with mouth open and had a constant muco-purulent discharge from the nostrils. In another case, a child aged sixteen months, there were difficult respiration, mouth-breathing, dryness of the lips, the face of violet hue; the respiration was noisy, hoarse, frequent, such as to closely simulate the respiration in a case of croup. The child has never been able to take the breast nor nursing bottle, but had been fed from a glass. Cough was frequent and often caused vomiting. In another case there was considerable emphysema. Four cases are reported. In all the treatment consisted of removing the growth by means of forceps of a particular model. The operation was performed at several sittings. In all complete recovery or great improvement followed.

ANTIPYRIN IN DIPHTHERIA.

Vianna (*Sem. Méd.*, March 30th, 1892), has found that antipyrin has a marked bactericidal and toxinicidal action on the bacillus diphtheriæ. He finds, first, that addition of the drug to culture media, in the proportion of 2½ per cent., renders these unsuitable for the nutriment of the microbe; secondly, that when added in the same proportion to actively growing cultures it causes their death within forty-eight hours; thirdly, the toxines are also destroyed, for cultures treated as above, and also filtered cultures, to which antipyrine is added, prove much less virulent to guinea pigs than the original cultures, animals living five to eight, twelve, fifteen, twenty, and twenty-four days, as against three days for the control. Vianna, therefore, strongly recommends the use of antipyrin as a therapeutic agent in diphtheria.—*Brit. Med. Jour.*

HYGIENE.

DISPOSAL OF SEWAGE.

The disposal of sewage is a question which has been to the fore for a good many years in various countries, says *Engineering*, but which, perhaps, nowhere on the Continent has been dealt with in a more systematic manner than in Germany. In Berlin the drains from the houses receive both the rain water, and dirty water, the dirty water from the kitchen, etc., and the contents of the water closets, conduct them to a system of radial sewers, through which they, by a natural fall, proceed to a dozen various pumping stations within the area of the town. From these the sewage, through the medium of combined force and suction pumps, passes through pipes of three feet or still greater diameter to the land which the corporation of Berlin possesses, and where the sewage is used as a fertilizer. The sewage makes its

final exit through a system of conduits so arranged that before reaching them it has parted with all its manurial power to the soil through which it is made to pass. The sewage water thus filtered reaches the river through the natural fall of the conduits in a comparatively purified state. The sewage is an exceptionally good manure, and the yield of grass on those fields that receive it is something quite out of the common, so that it can be cut some six or seven times during one summer. This system also seems to answer well as far as the sanitary side of the question is concerned, but still there are a good many places which prefer the method by which the sewage is collected in large tanks, whereby it is possible to benefit larger areas by its fertilizing qualities. Frankford-on-the-Maine is another German town where the sewerage system is very perfect, but owing to the excessive cost of land in that locality the sewage is not, as in Berlin, used as manure in the first instance. The sewage is purified before being allowed to escape into the Maine, and the residue is pumped into receptacles from where the farmers fetch it. The town of Hanover is also about to adopt the sewerage system on a larger scale. In Augsburg and Heidelberg the barrel system is used, much more satisfactory in the latter than in the former town. In Heidelberg the corporation itself attends to the emptying of the barrels.—*Science.*

MICROBICIDE SUBSTANCES OF THE SERUM AND ORGANS OF WARM-BLOODED ANIMALS.

M. J. De Christmas (*Annales de l' Inst. Pasteur*, No. 8, 1891) contributes a paper on this subject. Recent experiments have brought a large amount of evidence against the notion that this microbicide power is in any relation to natural immunity. The experiments now described seem to show that it is after all a merely physical or physico-chemical phenomenon. As serum does not long retain its toxicity, the following special method has to be adapted for demonstrating its microbicide power: (1) A tube containing the serum is inoculated; (2) a drop of this mixture is withdrawn at once and used to inoculate a gelatine plate (control); (3) at varying intervals other plates are made from the same tube. Comparison of the numbers of colonies appearing in the plates will give them an idea of the bactericidal power of the serum. Possible sources of error in this method may be (*a*) an irregular distribution of the bacilli; (*b*) unequal size of the drops used to inoculate the plates. Christmas, working on the lines of Metschnikoff, shows also that abrupt changes in the density of the surrounding medium have an inhibitory effect on microbes, so that they may even be killed if inoculated from a more dense to a less dense medium. Taking an anthrax virus which has been grown for ten generations in serum, and introducing a drop of it into each of three tubes containing respectively *bouillon*, sterile distilled water, and boiled water, he made a series of plates from each in the manner above described. Counting the colonies, he found in every case that a very apparent microbicide action had taken place. Other experiments show that perhaps much of the microbicide power of fresh serum is due to the presence of dissolved carbonic acid, for, eliminating the error from difference of density, and using tubes of *bouillon* and serum through which a stream of CO_2 had been passed, the author demonstrated that plates made from these showed little or no development of colonies. In a further series of experiments he proves that normal serum of rabbits, dogs, and horses has of itself little microbicide power, at any rate towards the following: B. anthracis, B. typhosus, B. pyocyaneus, B. diphtheriæ, St. pyogenes aureus. Quite a different result is obtained with the albuminous substances separated from serum by alcohol, and dissolved in distilled water. This solution shows itself very slightly favorable to the growth of microbes. Heating or considerable dilution renders it more assimilable, but even then microbes will not develop well in it. The explanation offered is that microbes require, in order that they may assimilate albuminous bodies, the presence of traces of peptone, and this substance is absent from such solutions. Other more subtle influences may, however, also be at work. In the last part of the paper Christmas attempts to determine whether the albuminoid substances prepared from the organs of animals are similarly by themselves unfit for the nutrition of microbes. In these experiments he uses the organs (1) of normal rabbits, and (2) of rabbits rendered immune against anthrax by pre-

vious injection either of the products of anthrax grown in an albuminous medium, or of a sterilized aqueous extract of the organs of rabbits dead of anthrax. To prepare his albuminoid liquids he adopts the following process. The organs are finely minced, and allowed to stand for twenty-four hours under glycerine, which is then separated and treated with strong alcohol. An abundant precipitate is obtained, which is freed from glycerine by alcohol, dried, and dissolved in water, the last traces of alcohol being removed by a current of warm air. The resulting liquid is yellowish, alkaline, becoming turbid on boiling, and giving a white flocculent precipitate with alcohol. This solution, if obtained from a "receptive" animal, behaves towards bacilli just as the solution of albumins obtained from serum does. Addition of a trace of bouillon to this made it an excellent nutrient medium. If however, the solution were made from an animal rendered immune, the result was different. In this case the liquid would not serve as a nutrient medium, even when mixed with two-thirds of its volume of bouillon: in fact it possessed some antiseptic power. Christmas does not state whether it has the power of rendering animals immune when injected into them. He holds, however, that the substance is not the same as the vaccinating substance contained in the organs of animals dead of anthrax. As to what this liquid contains which is not present in a similar glycerine extract from normal rabbits—whether it be a "defensive proteid" or a ferment—the author gives no definite evidence.—*Brit. Med. Jour.*

VACCINATION LAW IN ITALY.

A new vaccination law went into effect in Italy with the beginning of the year, which requires that every child shall be vaccinated before it is six months old, and again at eight, or at any time whenever the sanitary authority deems it necessary to promote individual or public safety. Those who are not vaccinated and revaccinated according to the requirements of the law, are excluded from schools, factories, workshops, benevolent institutions, etc. Provision is also made for the cultivation and supply of both animal and human lymph.

MEDICAL CHEMISTRY.

PHYLLANTIN.

This is the name given by M. Ossow, a Russian chemist, to a bitter principle extracted from *Phyllanthus niuri*, an euphorbiacea from Java. The new principle has the formula C_{30} H_{37} O_8. It crystallizes in colorless needless which frequently form rosettes or fans. It is almost insoluble in water but dissolves freely in alcohol, ether, chloroform, benzene, benzol and glacial acetic ether. Its toxicity is the most notable thing about phyllantin. It is most deadly, but the exact limits of its toxicity have not yet been established.

TESTING DIABETIC URINE.

Every one familiar with the behavior of diabetic urine towards Fehling's solution is aware of the fact that in many cases the reagent causes a yellowish or greenish-yellow separation (it can hardly be called a precipitate), which refuses to settle for a long time, and sometimes does not settle at all. J. Seegen has recently proposed a method (*Wiener klin. Wochenschr.*, Nos. 6–8) by which this difficulty may be overcome. It is as follows:

Upon a filter in a funnel place some finely powdered animal charcoal (from blood) and pass through it 20 to 40 cc. of urine. Pour the filtrate back until it comes through colorless. Next wash the charcoal with distilled water. The original colorless filtrate and the washings are used for the determination of the sugar. When the original urine contained only about 0.1 to 0.05 per cent. of sugar, the reaction appears in the following manner. The original unfiltered urine decolorizes Fehling's solution and causes, at most, a dichroic, greenish-yellow turbidity. The decolorized, filtered urine, when treated with Fehling's solution and boiled, develops a yellowish turbidity, due to the formation of cuprous hydroxide. In the first wash water the same may still happen, but in the second and third a clean precipitate of red cuprous oxide is obtained, such as is formed in pure aqueous solution of sugar.

For *quantitative* purposes the method is applied as follows: About 50 cc. of the urine are poured into a filter half filled

with blood charcoal, and the filtrate poured back again until it passes entirely colorless. The charcoal is now washed with very small quantities of distilled water, the washings united with the filtrate, the liquid measured (it is best to bring it to the original volume of urine, filtered), and a portion then tested in the usual manner. The red cuprous oxide will now be found to separate in a normal manner. There is, however, a loss of sugar, since the charcoal retains some of the latter. Experiments have shown that this loss amounts to about 10 per cent.

NEWS AND MISCELLANY.

THE SCALPEL.

The Scalpel is the title of a new college magazine issued by the College of Physicians and Surgeons, of Chicago, Ill.

A BIOGRAPHY OF PROF. D. HAYS AGNEW.

At the request of Mrs. D. Hays Agnew, Dr. J. Howe Adams is preparing a biography of her late distinguished husband; in consequence, he is looking for data on this subject, and is desirous of obtaining from all of Dr. Agnew's former friends, colleagues, associates, students and acquaintances all such authentic data as relate in any way to his career or character. Dr. Agnew's acquaintance was so vast and his life was so actively spent among his friends, while his own modesty was so marked, that undoubtedly a great many incidents, anecdotes, characteristic stories, etc., etc., are unknown to his family. All material, however insignificant or small, will be welcomed, and credit will be given to all data which are used.

VACCINATION IN ITALY.

The *Sanitary Inspector* states that a new vaccination law went into effect in Italy with the beginning of this year, which requires that every child shall be vaccinated before it is six months old, and again at eight, or at any time whenever the sanitary authority deems it necessary to promote individual or public safety. Those who are not vaccinated and revaccinated according to the requirements of the law, are excluded from schools, factories, workshops, benevolent institutions, etc. Provision is also made for the cultivation of both animal and human lymph. This has a direct interest for people in this country in view of the large and constantly increasing Italian immigration.

A NEW, SAFE METHOD OF ADMINISTERING TOXIC MEDICAMENTS.

The increased knowledge resulting from research in the fields of botany, chemistry, physiology, pharmacy, and materia medica has created a demand on the part of the medical profession for the essential or active principles of drugs in preference to the more cumbersome, less definite pharmaceutical preparations which custom and authority have so long sanctioned.

Not a few alkaloidal principles of drugs have been isolated, and are now frequently prescribed. The conservative element of the profession have, however, in view of the toxicity of certain isolated medicinal principles, and the acknowledged variety of strength and activity of products of this character of different manufacture, been loath to employ them when indicated.

The doses sometimes being fractions of a thousandth or hundredth, it is not possible for the physician to always bear them in mind, and in prescribing he is often in doubt as to what constitutes the proper therapeutical dose, and what the dangerous toxic one.

Dr. E. Trouette, in a paper read before the Paris Academy of Medicine, and published in the *Revue de Thérapeutique*, entitled "Duodecimal Doses of Toxic Medicaments," proposes a method of obviating the difficulties hitherto preventing the general use of many valuable medicinal principles. The plan he proposes is a new method of dosology based on the rational division into twelve parts of the maximum dose which may be given to an adult in twenty-four hours.

The advantages claimed for this method are, first, accidental poisoning need no longer be feared. Second, dangerous medicaments may from the outset be given in efficient dose without the least risk.

One of our leading pharmaceutical firms has prepared diurnules and diurnal tablet triturates of a large number of toxic medicaments.

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THE
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Clinical Lectures.

NUCLEAR OPHTHALMOPLEGIA IN THE COURSE OF TABES.

By DR. RENDU,
PARIS, FRANCE.

A CLINICAL LECTURE DELIVERED AT THE HÔPITAL NECKER.

Gentlemen:—I will to-day refer to you a patient who must have certainly attracted your attention on going through the wards, owing to his curious aspect and the characteristic appearance of his face. In fact, this man is suffering from a double ptosis; his eyes are tightly closed; he cannot open them, and so marked is the condition, that it has been necessary to apply a suitable bandage in order to keep elevated the upper eye-lids, without which appliance they inevitably fall. This paralysis stands by itself, so to speak, since the integrity of the other peri-orbital muscles is almost absolute; the movements of the eye-brows, those of the frontal, of the orbicularis palpebrarum, as well as of the other muscles of facial expression, are perfectly normal.

If you raise his eye-lids, you will immediately discover that on both sides, that is, on the right as well as on the left, the eye-ball is directed outwardly: in other words, there is a marked divergent strabismus. It is absolutely impossible for the patient to put the eye-ball in a normal position; there is a complete paralysis of the internal rectus. The upward and downward movements are likewise impossible to execute; nay, I commit an error in thus expressing myself, for the latter movement can still be made, its amplitude, however, being greatly diminished; and if you make a close examination you will see that it is accompanied with a certain amount of rotation of the eye-ball; this is effected by the intermediary action of the superior oblique. In one word, only the muscles supplied by the oculo-motor nerve are paralyzed, but (and this is an exceedingly important point) this nerve is not completely affected, since the size of the *pupil remains perfectly normal.* Contrary to what is seen in cases of ptosis, accompanied with external strabismus, there is no mydriasis. The iris is not paralyzed; it contracts perfectly to light, and you will observe that the pupillary orifice contracts or dilates according as an object is placed near or far from it. Add to this, finally, that the visual acuteness is normal, more so on the right side; on the left (where the ptosis is older) it seems that it is not entirely so.

If we are to investigate the cause of these symptoms, we will find that our patient has a most interesting history. His health had been good up to 1887; he had previously suffered, in 1865, from intermittent fever, and in 1868 contracted syphilis. He was afterwards, at Lyons, treated during 3 months for the perfectly characterized secondary symptoms of the constitutional disorder. After this he did not complain of any illness for a period of 20 years, and he thought that his syphilis had been entirely cured, which, I will repeat, was only treated during 3 months. The patient became afterwards subject to periodical cephalalgias and a slight trouble of the kidneys.

On the month of July, 1887, he went to South America, and there was obliged to make long rides on horseback. One day he was violently thrown from his horse, and when he returned to consciousness was told by his comrades that his left eye-ball was directed outwardly, and from that moment he continued to suffer from diplopia, which, as you see, had a sudden onset. At this time he was obliged to wear a bandage over the injured eye in

order to correct his diplopia, his vision being then confined to one eye.

There were, at the same time, other symptoms apparently foreign, so to speak, to the orbicular trouble: difficult micturition, at first slow and then a little painful; gastric derangement, and localized sweatings on the inferior extremities, accompanied with a pruriginous eruption over the plants of both feet.

Two months later, in February 1888, there appeared a progressive falling of the eye-lids, these being kept up only by means of the fingers. The patient could perceive also that the deviation of the eyes was on the increase; that the left eye-ball had already turned outwardly completely, and that the right one had commenced to exhibit a similar phenomenon. After this, he was not, strickly speaking, troubled with diplopia, but he had now lost binocular vision, and to-day the images perceived by him have an inclined form. Vision was only distinct in one eye, but at this time there had not appeared any ptosis of the right side.

This condition remained stationary during a period of 4 years, his general health continuing good, with the exception of occasional vertigos which he would experience especially when subjected to sudden drafts of air. He never suffered from dizziness nor from loss of consciousness. Fortunately for him, the ptosis of the left side completely destroyed the vision of one eye; by this he could see distinctly with the other eye; and he was thus enabled to continue at his trade which was that of a peddler. On the 29th of February, however, a change for the worst occurred. The patient, on attempting to bring down an object situated at a certain height, raised his head suddenly; and he was then attacked by vertigo, falling to the ground unconscious. He remained in this condition for 2 hours; when consciousness was regained he complained of severe pains all over the head, the back of the neck and the orbital region; the right eye-lid fell, and it became impossible for him to raise it now.

It was under these conditions that the patient sought our advice. Here is, then, an individual who has been attacked in succession (and every time in a rapid manner) by a double ptosis and paralysis of the movements of the eye-ball, movements which are under the influence of the oculo-motor nerve. It remains for us now to determine what is the lesion that has produced these various symptoms.

It is hardly possible to believe in that a cerebral, peduncular or pontine hæmorrhage has been the origin of such accidents. In a case of this nature we would observe upon our patient the existence of motor and sensory troubles; following the hæmorrhage or the congestion, there would appear a hemiplegia accompanying the ptosis, and afterwards a double hemiplegia if the lesion were extensive enough to affect both cerebral peduncles. The symptoms can be dated to 4 years ago; a hæmorrhage that old, capable of bringing about such disorders, would be followed, as is the rule, by a descending sclerosis characterized by contraction.

The hypothesis concerning a cerebral tumor affecting from the start the origin of one of the oculo-motor nerves, then that of the opposite side, deserves to be discussed with a great deal of care. This tumor might have lied upon two distinct points. Supposing it to have developed over the inter-peduncular region, on the level of the superior border of the pons; it could readily be understood how, provided it had acquired a sufficiently large size, such a tumor would press on the origin of the third pair. In such a case, however, we would have resulting motor phenomena, and partial tingling of the facial nerve, but nothing of the kind is observed in our patient.

Shall we admit, as in a case reported by Christ (*Deutsch. arch. f. Klin. Mediz.* B. XLVI, s. 497), the development of a tumor on the floor of the fourth ventricle, pressing on the nuclei of origin of the oculo-motor nerve, which are situated, as you know, not far from it? Under this hypothesis, the initial symptoms are identical with those we have observed in our patient; but their evolution is somewhat different. There may be produced, indeed, and quite rapidly, a progressive invasion of the motor centres of the face and neck, there coming on, in a few days, a labio-glosso-laryngeal paralysis, accompanied with ocular trouble, optic neuritis, etc.

Is it a syphilitic gumma with which we are dealing? Bearing in mind that our patient has, with a certainty, suffered from syphilis, this latter opinion may be entertained; but if we attempt to localize the

gumma, we come across certain difficulties, difficulties which we have pointed out in regard to tumors of the pons.

We can, nevertheless, solely by the analysis of the symptoms, come to the conclusion that we are dealing with a lesion affecting the floor of the fourth ventricle. Indeed, the dissociation of the present paralytic phenomena, the integrity of the pupil, contrasting with the ptosis and the paralysis of the ocular muscles supplied by the oculo-motor nerve, all this would incline us to admit the existence, not of a lesion of the nerve, but of *an alteration of its nuclei.*

You remember the beautiful researches of Hensen and Voelkers (*Archiv. f. Ophthalmol.* Bd. XXIV, S 1–26) regarding the origin of the third pair; you know that the nerve arises in isolated cells or in groups of cells, situated at the superior portion of the floor of the fourth ventricle, along the aqueduct of Sylvius. The fibres for the muscles have their origin in the nuclei alongside of the aqueduct; those for the iris, arise more externally, from the lateral portions of the floor. You will understand then, how lesions (the nature of which I have not yet established) of those groups of cells nearest the aqueduct of Sylvius, can produce motor phenomena of the eye-lids and of the eye-ball, without at all affecting the pupil. Is not this what is observed in our patient? The paralysis of the extrinsic muscles under control of the oculo-motor nerve, permits us to say that it is not due to a neuritis or to pressure upon the nerve; in this latter instance we would have a total paralysis. In the case under consideration, on the contrary, the dissociation of paralytic phenomena is the best proof that the lesion is of a centric origin, and that the lesion affects, although not all of them, the cells of origin of the oculo-motor fibres.

What is then the disorder capable of producing such symptoms? Are we dealing in the present instance with *superior acute poliencephalitis*, a good description of which has been furnished us by Wernicke (*Archive f. Psychiatrie*, 1889)? This is a disease as yet imperfectly known, characterized by a rapid destruction of the motor centres of the eye. Following the rapid invasion of an ophthalmoplegia there appear, in a very short time, symptoms of staggering, muscular rigidity and phychical disorders resembling those of a *delirium tremens.* This disease is ordinarily developed under the influence of alcoholism, in a rapid manner, and has a sudden termination in the course of from three to four weeks, or else death is preceded by symptoms of a labio-glosso-laryngeal paralysis. From an anatomical point of view, this disorder may be absolutely likened to an acute myelitis of the anterior horns. Now, in our case the development of the affection, which has been slow (it has lasted four years), and the absence of other medullary symptoms suffice for us to exclude the diagnosis just referred to.

Progressive atrophy of the medullary nuclei or centres may give rise to similar symptoms. This malady, whose process is the same as that of progressive muscular atrophy of the cord is quite rare; but I can cite two well marked examples of it. One of these cases is that reported by Bemhardt (*Berl. Klin. Woch.*, October, 1890): An individual, after an attack of nuclear ophthalmoplegia, exhibited symptoms of labio-glosso-laryngeal paralysis, and died suddenly; he did not show a single sign that would lead one to suspect the presence of tabes. The other case recorded by Wherry (Paragensia with ophthalmoplegia, *British Med. Jour.*, May, 1891) occurred in a man who after a sudden attack in which he did not suffer from loss of consciousness, complained of a bitter taste in the mouth, and then of diplopia, progressive ophthalmoplegia with deviation of the two eye-balls. A knowledge of the previous history of the case, led the author to admit the existence of a syphilitic lesion of the centres of the third pair, situated in the neighborhood of the aqueduct of Sylvius; such was corroborated by the fact that a complete cure was obtained after a course of an iodated treatment.

This observation presents a marked analogy with our case; yet I do not believe that we can accept a diagnosis of this kind. It is the presence of *tabes* to which we must attribute the eye-symptoms exhibited by our patient. Indeed, we have before us a tabetic patient, and I will show you that such is the case, by bringing to your consideration certain details concerning the pathological history of this individual, details to which I have not, purposely, directed your attention before. After the first symptoms of ocular paralysis, in 1888 and 1889, the patient suffered from sharp pains in the lower extremities,

which at first, were only occasional, but always of a lancinating character, peculiar to them; at the same time, the patient complained of a feeling of constriction over the thorax and in the head, and of sensory disturbances over the region of the trigeminal, such as numbness of the lips, loss of buccal and palatine sensibility. Micturition became difficult and laborious, notwithstanding that there was no stricture of the urethra. Finally, at the beginning of 1891, his walking became bad, and he assures us that his heels were particularly weak and had a tendency to draw towards one another.

After the last attack, which was accompanied with loss of consciousness, the symptoms became more pronounced. The patient could not stand erect, except when, by artificial means, he could keep one of his eyes open. The signs of Rombert and Westphal are now plain, and there are sensory disturbances, and especially marked, a spot of hypersthesia on the right thigh.

Here, therefore, the diagnosis is evident. We are dealing with a case of *tabes*, which manifested itself at first, by an ophthalmoplegia whose character, during four years, has been essentially progressive. I will, however, call your attention to the fact, that this tabes has exhibited a marked peculiarity, and the predominence of the medullary phenomena, the total absence of a special localization, of trophic or articular disturbances, distinguish it from other varieties of tabes with which we frequently meet.

The existence of oculo-motor paralysis in the course of locomotor ataxia, is not, moreover, absolutely rare. After the first works of Hutchinson, in 1879, a certain number of observations have been published. I will recall to your minds the quite recent cases reported by Pel (*Berl. Klin. Woch.*, 1890), Ziem (Ein fall von doppelscitiger ophtalmoplegie. *Centralbt. für. hervheilhunde*, 1887), Blanc (L'Ophtalmoplegie nucleaire, *Archiv. general. de med.*, 1887), and Dejerine who last year exhibited three patients whose condition was identical to the one that has been the object of this lesson. Ophthalmoplegia does not always present the same characters; it may be complete, the iris becoming implicated; the muscles of the eye-ball may be affected, while the elevator of the lid remains intact. From a clinical point of view, it is important to make a distinction between two great groups of ophthalmoplegia which affects all the extrinsic muscles of the eye-ball, and internal ophthalmoplegia in which only the iris becomes implicated. The onset of the disorders is generally sudden, that is, that of the paralysis the appearance of which indicates a permanent trouble, as well as that of simple functional disturbances that generally get well in a few weeks (Wherry). We must not forget, however, that relapses in these latter instances are not rare. We frequently meet with tabetic patients who show signs of ophthalmoplegia at more or less prolonged intervals.

How can we explain this phenomenon? It seems that an identical explanation cannot be given in every case. If, as is often the case, the ophthalmoplegia is due to centric lesion affecting primarily the nuclear origin of the oculo-motor nerves, completely destroying the nerve cells, it may also result from a primary alteration of the nerve trunks, from a neuritis of the oculo-motor nerves. This seems to me the most probable explanation that we can offer in cases of curable ophthalmoplegia. Neuritis of this nature comes on, most frequently, after an attack of an infectious disease during which, as you know, the poison has a marked tendency to localize itself upon the nervous system. In one of my last lectures I had occasion to show you a case of double neuritis as a sequela of influenza, and I then called your attention to the relative benignity of such neuritis, corroborated by the fact that in the case, a woman, sight was completely recovered soon afterwards.

In tabes, as I have said, slight cures of cases of ophthalmoplegia have been observed (Pel). Is this a sufficient reason to completely exclude, in such instances, a lesion of the centres, and to attribute the symptoms noticed to a neuritis? I, myself, do not believe in such a hypothesis, and it seems to me that up to the present time, it lacks evidence.

Dejerine believes that in order to establish a diagnosis between the centric and the peripheral origin of the symptoms observed, the fact of curability should, above all, be taken into consideration. Such an opinion, however, is absolutely free from criticism. Again, nothing will hinder us from admitting that a cell alteration, sufficiently marked to produce paralysis, is not susceptible of cure (a

complete cure), as in the case of a similar lesion of the nerve trunks. Finally, the dissociation of the paralytic phenomena is, to my mind, a capital proof in favor of their centric or nuclear origin.

What produces this alteration in the cells? It is more than probable that the symptoms are due to an acute congestion analogous to that which causes the lancinating pains; this hypothesis is in accord with the other inflammatory phenomena which accompany the ophthalmoplegia of tabetic patients: cephalagia, vertigo, pain in the back of the neck, and in the eye; it explains, in one word, the ordinarily sudden onset of the symptoms. This congestion, if persistent or repeated may, later, give rise to the progressive development of an ependymal sclerosis, comparable to that of the posterior spinal nerves, which may destroy the motor centres. These inflammatory outbreaks, occuring in the course of tabes, resemble very much those which you have seen come on in the course of general paralysis which has moreover, many other analogies with tabes; besides, it is not absolutely exceptional to see tabetic patients exhibiting cerebral disorders, such as difficulty of speech, vertigo, loss of consciousness, symptoms all which are similar to those occurring in general paralytics. We have at present, in one of our wards, a beautiful example of a similar association of symptoms which cannot be explained, I think except by the existence of a congestion of the brain.

On the other hand also, these circulatory disturbances of tabes may be traced to a vascular change, thus, Berger (*Bull. mens. Soc. Biolog.*, March, 1889) has reported a tabetic case in which he found the existence of an obliterating endoarteritis of the medullary vessels, which explained the symptoms observed. Finally, it is through the vascular alterations produced, that syphilis became the genesis of a large number of cases of locomotor ataxia.

In the present case the prognosis of ophthalmoplegia, in seems to me, is exceedingly serious; the symptoms are of too long standing to hope that they will retrocede. I believe that in our patient the paralysis will be permanent; in him the condition is incurable. On the contrary, it does not seem to me that the intregity of the sight is so seriously threatened. It is true that atrophy of the optic nerve comes on soon in the parataxic period of tabes or in the slow ataxias, but almost never does it coincide with the appearance of the ophthalmoplegia.

The greatest gravity of the prognosis is the danger of the medullary symptoms. If you admit that the phenomena observed in our patient are of a centric origin, and if, on the other hand, you will not forget that the oculo-motor nuclei are the neighbors of the circulatory and respiratory centres, you can readily understand how a more or less pronounced congestive process may bring about the production of serious symptoms, and even sudden death, as I have had the opportunity to observe in one case. Our patient has some difficulty of deglutition, which seems to show that the circulatory disturbances are not limited to the motor centres of the eye, but that they have a tendency to spread over the inferior portion of the fourth ventricle. The occurrence of such a development ought not to surprise us in the ordinarily rapid march of a medullary atavia.

I think that we are authorized in this case to give syphilis the preference, regarding the ætiology of the symptoms present; the onset of these, to a certain point, furnishes us the proof of our assertion. Indeed, the researches of Fournier has shown that 43 per cent. of tabetic cases occurring in syphilitic patients, begin at the brain, and the author concludes by saying that the cerebro-medullary form of tabes is observed especiallly in those syphilitic subjects in whose personal or hereditary previous history, moreover, it has not been possible to find a sufficient reason to explain that especial localization.

In spite of the probable syphilitic origin of this tabetic case, I do not believe that the specific treatment can produce an amelioration of the symptoms. Again, it is unfortunately the rule, in the majority of tabetic cases in which syphilis has been recognized as the cause, to find that the specific treatment is nearly always useless. Nevertheless, as this is the only rational medication to employ in such instances, I will not deprive our patient of it. I will, therefore, place him for a time under an active antisyphilitic treatment, such as mercurial inunctions and iodide of potassium internally in doses of from four to six grammes daily. I will also order revulsion and sulphur baths; but I will not

apply to the temples or the eye-lids, continuous or interrupted currents, because I believe that in cases of this nature electricity does more harm than good.—Translated from *Le Bulletin Medical*, No. 22, 1892.

PROGRESSIVE MUSCULAR ATROPHY; HEADACHE FROM EYE-STRAIN; HYSTERICAL VOMITING.

By C. L. DANA, M. D.,

PROFESSOR OF NERVOUS DISEASES IN THE N. Y. POST-GRADUATE MEDICAL SCHOOL.

Gentlemen:—You have already seen this patient once before so that it is not necessary for me to go into details of his case. From the general aspect of the right forearm you will see that he has progressive muscular atrophy. He is a boiler-maker by occupation. When I presented him to you before, I told you that the affection had come on very slowly; that there had been first a loss of grip, then atrophy, fibrillary contractions and vaso-motor disturbance, such as sweating. Progressive muscular atrophy of this kind is due to a degenerative process in the anterior horns of the spinal cord; it was formerly called, an *inflammation* but it is a progressive necrotic process, and not an inflammation. The plan of treatment which has been adopted, consists in injections of gr. $\frac{1}{25}$. of nitrate of strychnia daily, and it is my usual practice to give it alternately in the affected part, and in the back of the neck. It is given hypodermically, because experience has shown that in a certain proportion of the cases, the muscular atrophy is arrested by this treatment, and it seems reasonable to suppose that when a drug is administered subcutaneously, it "rushes" upon the nervous centres, so to speak, and exerts a more powerful effect upon them, than when it is slowly absorbed from the stomach into the circulatory system, and so gradually reaches the nervous centres. I frequently also prescribe phosphorus and arsenic, as in the following formula:

℞ Potassii arsenit.....gr. j.
Thomson's solution of phosphorus....oz. iv.
Misce. Sig.—One teaspoonful, gradually increased to a tablespoonful, t. i. d.

In addition to this, these patients should have the best of food, and an abundance of fresh air, and a moderate amount of electricity and massage. In progressive muscular atrophy, there is a temptation to yield to the solicitations of the patient, and do too much. You should pick out each muscle and electrify it with the faradic current, not more than six times at each seance, and massage should be carried out in the same careful way. Three times a week is usually sufficient, and I frequently alternate the electricity and massage.

The other day I saw a most pitiful case—a man who had been brought to this city from a western town. He had enjoyed excellent health up to four years ago, but at this time, his feet began to get weak, he noticed a steady wasting away of his muscles. About one year after this, the left leg began to be affected in the same way; first, the toe dropped, then the foot turned outward a little, then the calf began to waste, and after about a year and a half, he was unable to walk at all, and his two lower limbs were pefectly helpless. He then found that when sitting in a chair, if he leaned forward, he could not resume his former position, and if he leaned over backward, he would fall; in other words, the muscles of the abdomen, and the erector spinæ muscles had become weakened. The arms were the next to become affected. He had during this time, consulted a number of physicians, and some of them had been much puzzled over his case, but all expressed the opinion that his condition was incurable. As a last resort, he came to this city, a physical wreck, although his mind still remained keen. After careful electrical and other examinations, I made a positive diagnosis of chronic poliomyelitis of a progressive character, a condition which bears a very close relation to progressive muscular atrophy. The anterior horn cells in this man's spinal cord four years ago began to degenerate; first the right leg, then the left leg groups, then those of the back became affected, until now there is scarcely any gray matter in the anterior horns. So great have been the ravages of the disease, that now the prognosis is almost hopeless. I expect that there will next be some difficulty in speech or deglutition, or that he will have a respiratory paralysis from involvement of the phrenic nerve.

We are taught that progressive muscular atrophy is a hopelessly progressive disease, but this is not true, for there are certain types in which the progress of the

disease can be staid. One observer reports a series of eleven cases in which the atrophy was checked in eighty per cent. of the cases of hypodermic injections of nitrate of strychnia. I believe in the utility of these injections, and I think in addition to this, the "rest cure" should be prescribed, and the patient given stimulants and abundance of good food, particularly fatty food.

HEADACHE FROM EYE-STRAIN.

This next patient is a plumber by occupation, and he comes to us with the familiar story of a pain in the head. He does not smoke, drink, or chew, so that we cannot attribute his trouble to such vices. These pains first began about three months ago, and they are usually located in the temples, although sometimes they are felt in the top of the head. They do not always begin at the same time in the day, and they are attended by a certain degree of mental confusion, but without nausea or vomiting, or dizziness. He is not anæmic or dyspeptic. So far as I had time to test his vision, it is fairly good. The case evidently is one well calculated to bring out important points in connection with the general ætiology of headaches. I think you will all admit that we can exclude most of the *reflex* headaches. The *vascular* headaches are those which we find in anæmia and chlorosis, and uræmia, or associated with what are known as the rheumatic, gouty, and diabetic diatheses; in other words, where the headache is the result of a toxic condition of the blood from the development of a poison within the system. There is no such condition present in this patient; nor is there any history of hysteria or neurasthenia, so that we can exclude those headaches which are classified as *neurotic*. The *toxic* headaches are those due to alcohol, nicotine, lead, syphilis, etc. He has no symptoms of lead poisoning, and the history is distinctly negative as regards the others. Finally, there is the headache of the organic disease —tumor, catarrh and diseases of the frontal sinuses, etc. I think we can exclude all these in his case. I have gone over these causes of headaches systematically in order to show you how helpful to diagnosis such a method of examination becomes, if put into practice habitually.

Let us consider more in detail for a moment the condition known as *migraine*. Migraine usually begins before the age of nineteen and twenty years, and is most commonly one-sided, and accompanied by some nausea, and paroxysms ordinarily occuring with more regularity than they do in this man. I consider that his headache is due to eye-strain, and I propose to have his eyes carefully examined by our colleague in ophthalmology. If the trouble with his eyes proves to be slight, I would not prescribe eyeglasses for him until I had first determined what could be done by toning up the system in general, for, many people with marked errors of refraction will go through life without much annoyance until they become run down in health or neurasthenic, when they will become aware of the existence of this defect in their vision, and in such cases, measures directed to the general condition, will cause a rapid improvement in the local trouble. A rough and ready method which is often of service in the office for ascertaining the existence of insufficiency of the internal recti consists in covering up one eye of the patient, and directing him to look fixedly at a pencil which you hold before the eyes and gradually approach to the face. When it is brought near to the eyes, you quickly uncover the eye, and if there be such an insufficiency, you will notice that both eyes do not converge upon the pencil, but look in different directions. This you see is the condition in the patient before us.

HYSTERICAL VOMITING.

This young lady has been suffering for three years from a very distressing malady. She is fifteen years old, and has been in good health before this illness began. About three years ago, she began to vomit almost all food immediately after it was taken. This was not accompanied by nausea or any particular distress. She has been subjected to various kinds of treatment, up to the present time without benefit. She tells me however that when she is away on a visit, or goes to a new place to work, she is not troubled with it for a while. These facts are very instructive as they throw much light on the cause of her trouble. She has apparently dyspepsia; the tongue is clean and moist, the bowels move regularly, and contain digested fæces, notwithstanding that she tells us that she throws up "all her food." It is evident that she does not throw up as

brain, stomach, or kidneys, and we are therefore driven to the opinion, which is borne out by the history, that the case is one of hysterical vomiting, and I am glad to be able to show her to you as it is a very typical example of this condition. I always like to test such cases for the subjective evidences of hysteria. In the severer forms of hysteria you will always find the "stigmata" of this condition. They consists of disturbances of the special senses, such as concentric limitation of the visual field, loss of color sense, limitation of the range of hearing, divergence of the sense of smell and taste, anæsthesias of the hands and legs. These anæsthesias were formerly thought to be always distributed on one side of the body alone, but this is exceptional. They are usually distributed over the hand and forearm, and over the foot and leg very much like a glove or stocking. When present, these stigmata are extremely valuable as showing the nature of the disease. This young lady, strange to say, did not have these when I first examined her, but she did have what we often find in American women, a general sensitiveness of the whole body, and an abnormal acuteness of all her special senses. I presume her stomach shares in this hypersensitiveness. We conclude, then, that the general diagnosis of this case is hysteria, and the special diagnosis, is hysterical vomiting, or a neurosis of the gastric nerve.

I cannot give you the exact physiological mechanism of this process, because I have not watched this person in one of her attacks. In some of these cases, the food is not all swallowed, but some is retained in the lower portion of the œsophagus, in a sort of second stomach, and is afterwards regurgitated, instead of being really vomited. This is an old and strongly rooted habit in this lady, and some heroic therapeutic measure will be required. The surest way would be to take her away from home and put her in an institution where she would be under strict supervision. Then, the use of cold baths and the administration internally of two or three grains of the valerianate of zinc, three times a day, would be indicated. It might even be necessary to have her stomach washed out. I think she would also be amenable to hypnotism, but I have not sufficiently tested her as yet as to this point. A very simple way of testing patients re-

much food as she would have us believe. We find no evidence of any disease of the garding their susceptibility to hypnotism is to place a thimble, such as is used in banjo playing upon the patient's finger with a mysterious air, and then direct her to watch the finger intently for about fifteen minutes to see what will happen. If the patient perceives a numbness in the finger, the test indicates that she is a good subject for hypnotism, but if on the contrary, she laughs at the idea of watching the thimble, and evinces much skepticism as to the probable result of the test, it will be well for you to abandon all thought of trying to treat her by this method.

PYREXIA IN URÆMIA.

Richardiére and Thèrèse (*Rev. de Mèd.*, December 10, 1891) say that pyrexia not only does not exclude uræmia, but may permit its recognition and even prevention. It does not depend on the symptom-complex nor on the nature of the renal lesion. In the uræmia of acute Bright's disease one is tempted to explain the temperature by the local inflammation; yet it is uncommon to see uncomplicated acute nephritis with any marked rise of temperature. Uræmia, whether in the form of convulsions, coma, or delirium, may be attended with pyrexia, and therefore the temperature in uræmic eclampsia is not to be attributed to the increased muscular movements. No cases are recorded of uræmia with pyrexia when the symptoms have been referrable to the alimentary canal or respiratory system. The course of the temperature is in relation with the intoxication. It rises with the premonitory symptoms, attains its maximum with the attack, and falls when the uræmia symptoms improve or disappear. The pyrexia has no special prognostic significance. Once the temperature becomes normal the attack may be considered over. The cause of the pyrexia lies in the uræmia as it is seen apart from visceral complications. Cerebral œdema was noted in some fatal cases. Two substances have been found in the urine, one of which, when injected into animals, produces a rise of temperature (Binet), the other a fall of temperature (Bouchard), and the authors think that in the auto-intoxication of uræmia there is or is not fever, according as the one or other predominates.—*Brit. Med. Jour.*

Communications.

THE TREATMENT OF ACUTE ARTICULAR RHEUMATISM: A CLINICAL AND STATISTICAL STUDY OF EIGHTY-FOUR CASES WITH A CONFIRMATORY PLEA FOR THE SALICYL-ALKALINE TREATMENT.*

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In a mental debate as to the contents of this paper with special reference to the therapeutics of acute articular rheumatism, the author was forcibly reminded of a truism expressed even so long ago as 1837 by an author in his introduction to a book described is an October number of the *Botanico-Medical-Recorder*, in which introduction he said: "The old school materia medica will be critically examined, it will be shown that the remedial agents are not to be depended upon, and that no two authors who have written upon the subject precisely agree as to the effects which many of them produce. The discrepancies of medical authors from Hippocrates down to the present time will be accurately detailed."

In the light of the advancement of the nineteenth century, and that of all preceding years, an impartial critic must even now write in a similar strain.

It is easier now than then to characterize discrepancies, but it is often as difficult to establish our own preferments by well-conceived and scientific conclusions.

Pathological anatomy through macroscopical and microscopical methods has demonstrated the various nucleolar and protoplasmic changes, and denominated the many orders of schizomycetes to the almost satisfaction of investigators. For that we honor it, as well as for the new therapeutic means which these investigations have suggested, resulting in the cure of diseases hitherto considered incurable; but even pathological anatomy, while it has not nearly reached its limit, has as yet failed to define satisfactorily some of the commonest of maladies, notably acute articular rheumatism.

Medical scientists are daily growing more averse to the consideration of any drug or drugs in a given disease, the therapeutic action of which in that particular disease cannot be thoroughly explained, and yet who can deny that in the treatment of syphilis in its several stages, we have specifics in mercury and the iodides.

In the absence of light as to the ætiological factor producing syphilis, if scientific, it would not be humane to refuse to use those drugs which are known clinically to have great value.

That acute articular rheumatism is due to the entrance of some morbific principle into the blood, is very generally conceded, but investigations in the direction of its nature have hitherto been futile; the pathological changes produced by that agent are well understood, but throw little light upon its prime factor.

Of the many theories advocated, the one attributing it to a specific organism seems very plausible, although as yet the agent has not been demonstrated.

That it is due to the retention in the blood of some excreted or changed substance, and that substance uric acid or some modification of it seems highly probable from many points in the natural history of the disease; but whatever the agent, the above two theories can either of them be strengthened by clinical testimony of the good effects of the preparations of salicylic acid—known enemies to many forms of bacteria—and of the neutralizing alkalies.

One of the most difficult features in the clinical history of the disease to overcome, in the consideration of treatment, is the tendency of the disease to involve the heart, the serous and synovial membranes; but the most peculiar of all, in the matter of its relations to the blood, is the fact that it produces its ravages through the medium of arterial and capillary blood, almost totally ignoring the nervous system.

Why an agent so very effective in the production of organic valvular lesions should involve one side of the heart to the almost absolute exclusion of the other is a

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puzzling query, and one which must be satisfactorily answered before the true pathological character of the disease can be determined.

Can it be that in passing from the right side of the heart through the pulmonary circulation to the left side, this so-called morbific principle is increased in virulency; or is it probable that the arterial blood in passing through the systemic circulation is filtered, so to speak, of most if not all of this foreign virus; or after all is it of such a nature that it is destroyed or held in abeyance by the CO_2 of the venous blood, to be removed or set at liberty again by the oxygen of the air?

These are interesting and vital questions and must be answered before any logical deductions can be drawn relative to its true nature; answered before any treatment can be declared divested of empiricism, for as shall be shown later on in this article, of the 84 cases considered not one of them developed a lesion referred to the right heart.

Such lesions have been reported, but they must be exceedingly rare, and to require worthy notice must be proven to have developed under observation.

The writer does not deny the possibility. These few introductory remarks have been made by way of provoking discussion in order to arrive at some definite explanation of the good effects derived from the treatment of acute articular rheumatism, by the salicyl-alkaline remedies, and not with an attempt to introduce all of the many theories offered to explain its pathological character, for to do the latter would involve much time and prove of no practical value.

It may be added here, however, that while the theory of its uric acid cause seems to the author's mind to meet a number of demands than any other. He is not prepared to adopt it since experiments which he has made, and is now engaged in making, as the examination of the blood in health and disease, and the examination of serum drawn through the medium of an epispastic, etc., do not warrant him as yet in forming any conclusions; furthermore, such a discussion can scarcely come within the limits of this paper.

The conclusions which he has drawn from a study of the cases are based upon clinical evidences only.

Pari passu with the speculation as to the origin of acute articular rheumatism, has gone one after the other, rising and falling with popular favor and dissent, a host of drugs and remedial measures.

Mention of most of them he shall sedulously avoid, nor shall he discuss the merits of that treatment which sought at one time to prove that acute articular rheumatism is a limited disease demanding only palliative treatment, and little of that; one-half of the proposition is admitted and believed, but to one who has seen a helpless individual suffering torture equal almost to the the darkest days of the Inquisition, within the short space of a few hours relieved, if not entirely freed from pain by the judicious use of the salicylates and the alkalies as the basis of treatment, palliative treatment, only, seems short of criminal, nor will the free use of anodynes alone absolve the conscience.

The object of this paper being to bring into special prominence the treatment mentioned above, from a clinical standpoint, no attempt will be made to introduce any other routine other than the mention of certain drugs and methods which act as adjuvants.

The author does not see proper to make any such distinction as dividing cases into plethoric and anæmic, believing that all cases, provided they present themselves during the acute inflammatory stage, should be similarly treated, each case best suggesting subsequent remedies; neither does he think it necessary to divide them into acute, subacute and chronic since in the first place the present subject deals mainly with the former, and again his convictions lead me to believe that the joint inflammation is not a fair index of the ravages being produced by the circulating poison upon other tissue.

Granting a case presents itself with acute articular rheumatism for the first time, what should be done with it?

Occurring as it usually does in young adults, consider carefully the patient's habits, his manner of life, his occupation, his attention to sexual and general hygiene, etc., all of these things aiding far in subsequent treatment, and in advice towards warding off succeeding attacks.

In most cases it is advisable to give a cathartic as early as possible, the bowels usually being constipated.

An excellent combination is calomel gr. ¼, triturated with potassic-bicarb. grs. V, given every hour for eight doses, to be followed one hour after the last dose by one half ounce of rochelle salts, the latter repeated if necessary.

The above combination is useful for the following reasons: (a) Calomel in such doses is not only mildly cathartic but somewhat diaphoretic, and decidedly diuretic—each action in itself serviceable.

(b) The potass. bicarb., according to well recognized ideas, promotes the effect of the calomel, and additionally acts to aid in reducing the hyper-acidity of the fluids of the body.

The rochelle salts for obvious reasons, is decidedly indicated and should, in the writer's judgment, be used rather freely during the subsequent course of the disease.

So much for the preliminary treatment, if it can be called such; but even before the above has been carried out entirely, not interfering in any way with it, the administration of the alkalies and salicylates should be initiated.

Of the alkalies perhaps as good a one as any is the ordinary sodii. bicarb., given in sixty grain doses every four hours and repeated during the night if urgency demands it.

As to the choice of the salicylates there is much difference of opinion, unequivocally the writer prefers the sodii-salicylat. for several reasons: It is very soluble in water, is easily administered, is not so irritating as some others, and if it is true, as it is supposed, that the acid is itself converted into a basic salt and that salt sodii-salicylat., then rational therapeutics would call for the use of the latter.

Salicylic acid is preferred by some, the objection to it is its slight degree of solubility in water, unless in combination with a neutral salt, the borate of sodium adding to its solubility. An additional objection is the gastric irritation produced in some cases. It is not absorbed so readily as sodii-salicylat.

Salicin is perhaps less easily absorbed than either of the above, as observed by tests of the urine, saliva, etc. Clinically it is not nearly so reliable. The same may be said of salol.

In the treatment of the cases included in this study, several of them were put upon salicin and salol (as their histories will show) for the first three or four days, and their temperature noted.

Slight influence on either temperature or pain was observed. The cases were then put upon sodii salicylat., and marked changes noted.

This alone would not be conclusive evidence, since one might say that the disease had already run its course, had not many tests of the sodii-salicylat. from the beginning of the disease proved clearly that they were not mere coincidences.

The very fact mentioned here is also conclusive toward proving that the good effect of the combined treatment is not due to the alkali alone, as some have attempted to prove; if it were so then salicin plus an alkali would be, *caeteris paribus*, as effective as sodii salicylat. plus an alkali.

Many of the failures with the salicylates have been occasioned possibly—provided the cases were properly selected—by the injudicious use of the drug, in some cases giving too much, in others not sufficient. Few cases require more than 10 grains every two hours, and few require less. It has been the rule of the writer to give 10 grains, repeated every two hours during the night as well as during the day, as long as the acute stage lasts; and in a hospital like Bellevue Hospital, where the greater number of these cases were treated, the orders were very rigidly carried out.

In some cases it is advisable not to administer the night doses, but in many for the first three or four days it is safer, and by safer is meant in order to prevent or assist in controlling cardiac complications, for as shall be shown later on of thirty-six cases seen on an average of 6.02 days after the onset of the attack, only one developed any cardiac complication during treatment, ond that one developed pericarditis within ten hours after treatment was begun. Possibly the pericardial inflammation had existed even several hours before it was recognized.

This gives practically a perfect result, showing that before a certain date during the progress of the disease, in these cases an average of 6.02 days, if the patient can be saturated with the remedies, the danger of cardiac complications is much lessened.

The percentage of such complications as generally reported under a mixed treatment, is variously estimated, in endocar-

dial inflammations it is to put at from ½ of 1 per cent.—9 per cent.; in pericardial, it is placed at about 15 per cent. These figures, however, the writer believes do not represent the true number of cardiac complications, for every apparent murmur heard over the heart does not necessarily imply endocarditis, and on the other hand murmurs often exist indicating actual endocarditis, but are not recognized.

Perhaps some of the murmurs reported to have been heard over the right heart could have been shown to have other than a direct connection with the inflammatory process.

At times it may be found necessary to give fifteen grains of the sodii salicylate every two hours instead of ten.

One of the cases reported, a young girl of ten years, took fifteen grains every two hours for eight days, the treatment being repeated at night as well as during the day; at no time did she complain of gastric irritation, nor did she suffer from any disturbance of cerebration such a case, however, is very exceptional.

To *prevent* the *unpleasant effects of sodii sal.* upon the central nervous system, potass. bromide, in about ten grain doses, may be found serviceable.

Another important part of the treatment is to *promote diaphoresis* and the use of hot pack, or of a warm bath night and morning, provided the patient can submit to the moving, will be found very beneficial.

The bath is best used as the acute symptoms are subsiding but not at all if serious cardiac complications exist, unless the steam bath be employed, as 'tis advisable not to move the patient if avoidable. Heat thus used is very grateful and diminishes any existing pruritus; in some way it modifies the tendency to skin eruptions, which exists in a small per-centage of cases.

Dilute nitro-muriatic acid added to the bath affords comfort.

To *control the pain* constitutionally ℥ii of the U. S., sol. morph. sulph. internally, or Mvj or vij of Majendie's solution hypodermatically should be administered in all cases where much suffering exists.

Locally over the inflamed joints a lotion containing ammonium chloride acts excellently, afterwards wrapping the parts in flannel.

Heat or cold as seems most grateful might be used. Gentle massage often affords great relief.

For *diet* milk only, and continued for several days after the acute symptoms have subsided. The treatment of complications is not called for here.

During convalescence tonics are indicated, and the tr. ferri chlor. is one of the best for reasons connected with its physiological action.

If for any reason the sodii salicylate can not be borne, then the other salicyl-derivatives should be tried.

The oil of gaultheria containing about 90 per cent. of methyl salicylate may be found serviceable. Very few stomachs, however, will refuse the above treatment if the drugs are fresh and judiciously employed.

To meet any extraordinary indications the ingenuity of the attendant will offer suggestions.

The author does not and can not claim any originality for the principles laid down, and these remarks but preface a summary of cases treated on a basis fortunately widely recognized.

Again, he does not claim to have treated every case strictly on these principles, as some cases showing a tendency to chronicity were given potass. iodid., tr. guaiaci. ammonia, etc., with benefit. Cases combining that variety of phenomena and classified as rheumatic gout were given special treatment additionally, and where apparently they did not belong to the present summary were left out altogether.

The conclusions deduced were drawn from bedside observations, and after repeated examinations.

Following is the summary, the author refraining from reading each individual case.

Age.—Average age of all cases considered,					29.88	
Average age of all cases first attacked,					28.50	
Oldest first attacked was in a female,					65	years.
Youngest " " " "					9	"
Next youngest first attack (two cases),					15	"
Between the age of	15	and including	20,		16	cases.
" "	20	"	30,		39	"
" "	30	"	40,		18	"
" "	40	"	50,		7	"
" "	50	"	60,		2	"
" "	60	"	65,		2	"
Between the ages of	15	and including	25,		33	"
" "	25	"	35,		31	"
" "	35	"	45,		11	"
" "	45	"	55,		6	"
" "	55	"	65,		3	"

Least number for any decade, between

55 and 65, 3 cases. The first ten years of life not considered, as cases under fifteen years of age did not come under the writer's notice in hospital practice.

Greatest number for any decade, between 20 and 30, 39 cases.

Next greatest number for any decade, between 15 and 25, 33 cases.

Next greatest number for any decade, between 25 and 35, 31 cases.

The number between 15 and 35, 64 or 76.19 per cent. of all cases. The number before 30 years, 54 or 64.28 per cent. of all cases. The number before 40 years, 73 or 86.90 per cent. of all cases.

SEX.—Number of females considered, . . . 20
Number of males considered, . . . 64

COLOR.—Number of whites considered, . . 83
Number of negroes considered, . . 1

RACE.—

United States,	27	Hungary,	2
Ireland,	22	France,	1
Germany,	10	Scotland,	1
England,	6	Sweden,	1
Italy,	4	Newfoundland,	1
Russia,	4	Canada,	1
Austria,	4		

OCCUPATION.

LABORERS, including drivers, carpenters, peddlers, messengers, butchers, painters, gas-workers and plumbers, 47, 55.95 per cent.

DOMESTIC, including waiters, laundresses, housekeepers, cooks, 22, 26.19 per cent.

The remaining number including clerks, barbers, tailors, etc., 15, 17.85 per cent.

FAMILY HISTORY.—Acute articular rheumatism had occurred in last generation in 9 cases, 10.74 per cent.

PREVIOUS ATTACKS.—Previous attacks had occurred in 31 cases, 36.90 per cent.

PRESENT ATTACK—Extremity involved. Began in lower extremity in 64 cases, . 76.19 per cent.
Began in upper extremity in 20 cases, 23.80 "
Confined to lower " 27 " 32.14 "
" upper " 9 " 10.71 "
Extend to both extremities in 48 " 57.14 "

PRESENT ATTACK—JOINT INVOLVED.

Found in one knee, other joints involved, in . . 27 cases, 26.10 per cent.
Found in both knees, other joints involved, in . . 71 " 84.52 "
Found in both knees only in 6 " 7.14 "
Found in one knee only in 1 " . . .
Found in one ankle, other joints involved, . . 10 " 11.90 "
Found in both ankles, other joints involved, . . 53 " 63.09 "
Found in both ankles only, 1 " . . .
Found in hip or hips, other joints not considered in . 11 cases, 13.09 per cent.
Found in shoulder or shoulders, other joints not considered in . . . . . 32 " 38.00 "
Found in elbow or elbows, other joints not considered in . . . . . 23 " 27.38 "
Found in wrist or wrists, other joints not considered in . . . . . 25 " 29.76 "
Found in metacarpus and phalanges, other joints not considered in . . . . . 6 " 7.14 "
Found in metatarsus and phalanges, other joints not considered in . . . . . 2 " 2.38 "
Found in temporo-maxillary, other joints not considered in . . . . . 1 "

DURATION BEFORE AND AFTER TREATMENT.

Average number days of duration before treatment 9.10.
Average number days of duration after treatment, 16.80.
Total number days to dismissal of case . . . . . 25.90.
Average number days of duration before treatment in first attack . . . . . 6.39. (53 cases.)
Average number days of duration after treatment in first attack . . . . . 16.40. (53 ")
Total number days to dismissal of case, in first attack . . . . . 22.79.

COMPLICATIONS.

Number of cases in which old cardiac complications existed . . . . . 17. 20.15 per cent.
Number of cases in which recent cardiac complications existed . . . . . 24. 28.57 "
Number of cases in which recent and old cardiac complications existed . . 36. 42.85 "
Average number of days of duration before treatment of recent cardiac complications, 14.2.
Average number of days of duration after treatment of recent cardiac complications, 17.3.
Total number of days of duration to dismissal of case . . . . . 31.5.
Average number of days of duration before treatment of *no* R. C. C. . . . . 7.2. (60 cases.)
Average number of days of duration after treatment of no R. C. C. . . . . 17.2. (60 ")
Total number of days to dismissal of case . . . . . 24.4. (60 ")
Average number of days of duration before treatment of no R. nor O. C. C. . . 6.02. (36 ")
Average number of days of duration after treatment of no R. nor O. C. C. . . 14.30. (36 ")
Average number of days to dismissal of case . . . . 20.32. (36 ")
Total number of cases indicating endocarditis . . . . . 22.
Number of cases marked *slight systolic apex* murmur . . . . . 8.
Total number of cases indicating pericarditis . . . . . 5.
Ratio of pericardial to endocardial . . . 1 : 4.25.
Left side of heart involved in . . . 22 cases.
Right side of heart involved in, . . no "
Acute *pleuritis* complicating in 4 cases (1-21).
Acute *lobar pneumonia* complicating in 1 case (1-84).
Suppurative endocarditis and suppurative myocarditis, 1 case.

TEMPERATURE.

Average tempt. on first day seen, . . . 101.6
Average pulse rate on first day seen, . . 93.7
Highest tempt. on any day, ... 104.9
Highest pulse rate on any day, . . . 121.0

RESULT.

Of the total cases, ... No. 84
Died, ... 3
Improved, dismissed or passed out of notice, . 8
Cured, ... 73

Of the 36 cases with an average duration before treatment of 6.02 days only one developed any cardiac complication as has been mentioned above.

Of the remaining 48 cases, 21 had developed heart complication, which in no case could be attributed to purely functional causes in either the present attack or supervening upon an old trouble, similarly acquired.

Of these 21 cases one did not yield to the specified treatment, but continued to develop attacks at rather frequent periods for the next fifteen months while under observation. In this case, however, the patient did not bear the drugs well, not being able to take but very small doses, and those for only a short period; and when it is remembered that this case, then only fifteen years of age, had been suffering from annual attacks ever since nine years old, and at the time of observation presented a marked murmur of mitral insufficiency, our faith on account of this failure should not wane.

Of the 8 cases noted "Improved" one had been sick three weeks and had suffered from A. A. rheumatism before. Another had been sick 9 weeks.

Another had been sick 29 days. Another, the case of the girl 15 years old (other treatment used). The remaining four were treated with other additional drugs on account of the salicylates not being well borne.

Of the three cases noted "Died," one, although seen before the fifth day of sickness, had already developed acute ulcerative endocarditis, and on the second day of observation a profuse petechial eruption on arms, legs and back.

Singularly this patient lived nine days longer or nearly sixteen from onset of attack.

Autopsy revealed suppurative endo-, peri- and myo-carditis. Both apices of lungs presented old tuberculous nodules with pleuritic adhesions. A small suppurative foci in spleen and liver.

The 2nd case, when first seen had been sick one month. Had suffered from A. A. rheum. two years before and presented at time of observation a marked murmur of mitral insufficiency. Patient lived thirty-one (31)days longer. Autopsy revealed acute pericarditis, acute double pleuritis, and acute lobar pneumonia. The patient, a female, was forty-eight (48) years old with an alcoholic history. The 3rd case, a man, aged 60 years, had suffered from A. A. rheum. several times before. Presented on examination which was made twenty-one days after onset of attack, marked mitral regurgitation and mitral presystolic murmurs. Lived six days longer. Autopsy revealed acute double pleuritis with effusion and rather recent endocarditis engrafted upon old valvular trouble.

From the foregoing study the writer has felt constrained to draw the following brief conclusions:—

(1) That acute articular rheumatism is a specific disease due to some morbific principle or infectious agent circulating in the blood.

(2) That whatever that principle or agent, the salicylates tend to either destroy it or prevent any further formation.

(3)That in substantiation of some acid factor as a cause, though possibly only as a complication, the author noted a constant acid condition of the urine, and a neutral or acid state of the saliva in 80 per cent. of the cases examined.

(4) That the disease is self-limited with a tendency to recovery within a variable period.

(5) That while self-limited, cases are very prone to develop cardiac complications as in direct proportion to the polyarthritis, this is not the invariable rule—having many notable exceptions. The same thing may be said regarding the constitutional phenomena.

(7) That under the salicyl-alkaline treatment these or other complications are either absolutely prevented, in the vast majority of cases, or their severity mitigated.

(8) That drugs to reduce the heart's action, thereby lessening the tendency to valvular complications by relieving the valves of extra amount of work thrown upon them, are seldom indicated, the salicylates sufficiently controlling.

(9) That acute articular rheumatism is a disease likely to develop again in those once attacked, and that with each subseqent attack the tendency to cardiac complications increases.

(10) That this tendency to recurrence seems to the writer to disclaim rather than to substantiate the theory of its infectious nature.

(11) That the writer does not believe the statement that the salicylates render subsequent attacks more probable, since

of the thirty-one (31) cases of recurrent acute articular rheumatism recorded, but very few of them could give a history of having taken similar treatment before; furthermore such a proposition can not be based upon any plausible hypothesis.

(12) That the above mentioned treatment shortens the duration of the attack particularly the very acute stage, relieving pain often within a few hours from the time of saturation.

(13) That the period of saturation is variable, depending upon the amount of the drug that can be borne by the individual.

As the salicylates appear in the saliva and urine often within twenty minutes after administration, and the physiological phenomena manifest themselves within six hours, it is fair to assume that by the time the patient has taken four or five doses of fifteen (15) grains each, the condition of saturation is approximated, and within twelve to twenty-four hours attained.

(14) That while the duration of cases reported seems as long as or longer than the average cases under other treatment, the time computed represents a supposed absolute freedom from any further rheumatic influence, many of the cases appearing well several days before discharge.

(15) That from the observation of the above and other cases, the writer is led to believe that the treatment should be continued, three or four days at least, after all objective and subjective symptoms have disappeared, for since the poison may circulate in the blood for a variable time, producing endocarditis, even before any definite articular symptoms appear, in like manner may it continue for several days after cessation of these symptoms.

(16) That if this fact, if it be a fact, were more generally recognized, fewer cases of so-called relapse from salicyl-alkaline treatment would be reported.

(17) That if all cases could be put upon the above treatment at least within six days after first symptoms have manifested themselves, the subsequent course of the disease would be mitigated, and serious complications often prevented.

(18) Deductions with reference to influence of occupation, etc., as ætiological factors are mentioned under tabulated statistics. The same may be said of frequency of extremities and joints involved, etc.

THE CIRCULATION IN THE BRAIN AND EYE WITH INCREASED PRESSURE AND GLAUCOMA.

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Circulatory disturbances in the brain and eye with regard to increased intracranial and intra-ocular pressure have many points of resemblance.

They are respectively enclosed within a firm capsule of an unchangeable capacity. Both organs are subject to pressure as a result of the circulation of the nutritive juices. In both instances this pressure, when it goes beyond physiological variations, affects the optic nerve, producing a papillitis "choked disk," or, an excavation of the optic nerve.

The functions of the brain and eye depend on a normal circulation in most delicate structures, hence, the inflow and outflow must be balanced and any brief obstruction may give rise to a serious disorder.

Another resemblance we see pathologically where increased pressure in both organs is the most frequent result of atheromatous degenerations or inflammatory changes of the vessel walls with their consequences.

The brain while filling the cranial cavity has many external communications through the entrance and exit of the blood-vessels, lymphatics and nerves, but they fill out their foramina completely. The spinal cavity is capable of a change in volume as the membrane obturatoria atlantis posterior and anterior, the ligamenta flava and the sheaths of the intervertebral foramina are capable of distension.

If the subarachnoidal spaces of the spinal cord are injected with a colored solution, this extends quickly over the surface of the brain, passes through the foramen Magendie into the fourth ventricle so on until finally it fills the central canal of the spinal cord (*Key. Retzius, Althan*). It is suggested that the subarachnoidal spaces communicate with the

lymphatic vessels of the brain and pia mater, that the latter unite at the entrances of the arteries at the base of the brain and pass down as the plexus jugularis interna.

In the arterial system of the brain there is a positive pressure which propels the blood while the outflowing circulation is under a negative pressure in the veins. Still another factor is found in the ventricles and lymph spaces which contain the cerebro-spinal fluid. If the brain is so compressed that pressure is exerted upon the ventricles there will be increased pressure of the csp. fluid in all the spaces, and the ligaments of the spine bulge outwards. Experiments do not show that increased tension of the csp. fluid compresses the brain and renders it anæmic. Anatomists are not certain whether the csp. fluid stands in communication with the lymphatic vessels.

Adamkiewitz says experimenters who inject saline solutions into the spaces filled with csp. fluid do not compress the brain by increased tension, but from the irritation produced by the experiment, and, according to the same authority, neither experiments nor clinical experience have furnished sufficient supporting evidence to construct a theory of compression of the brain.

It is generally accepted that the brain pulsates, that the csp. fluid flows to and from the spinal into the cranial cavity, that there is a systolic and respiratory movement, and finally, Cramer claims that the veins of the brain pulsate. This phenomenon is explained in the following manner. In heart systole the mass of blood receives an additional amount and the tension of the csp. fluid is increased. As the blood pressure diminishes gradually from the arteries to the capillaries and so on to the veins, the veins are that part of the vascular system in which there is least pressure and consequently the one which can be compressed with the greatest ease, The increase in pressure being rhythmical. the compression of the veins is rhythmical—remittent, and they must show pulsation.

When in passive hyperæmia the outflow of venous blood from the cranial cavity is obstructed, the arterial supply will naturally meet with an obstruction. When the contractile condition of the vessel wall is lost a part of the blood pressure is transmitted to the csp. fluid.

When then the tension in the cerebro-spinal cavity can no further accommodate itself by distension of the spinal ligaments, arterial hyperæmia compresses the capillaries of the brain.

Hyperæmia and anæmia would thus appear to disturb the nutrition of the brain in the same manner and lead to similar disturbances of function. Knoll claims to have observed the cranial arteries after a temporary anæmia when refilled with blood under a certain pressure, to relax and produce hyperæmia.

Cramer says in experiments which raise the blood pressure in the aortic system the cerebro-spinal pressure is augmented and an increased outflow of venous blood, the result. Pressure in the brain is then transmitted from the blood to the csp fluid on to the dura.

The blood-vessels of the brain with their perivascular spaces, the ganglion cells with pericellular spaces, with large spaces containing the csp. fluid, the structure of this organ protects its more delicate tissues trom the variations of physiological pressure.

One of the most prominent symptoms of intra-cranial pressure is "choked disk."

Descending neuritis is observed in diseases of the cortex, in diffuse maladies, principally acute and chronic meningitis and hydrocephalus. Choked disk is most frequently seen in tumors of the brain. The gradual growth of a tumor demanding more and more space, displaces the cerebro-spinal fluid, and also fills with fluid the spaces between the sheaths of the optic nerve which stand in communieation with the lymph spaces between the cerebral membranes—hydrops vagina nervi optici—Schmidt, Mauz.

This accumulation of fluid brings about a stasis of the lymph in the optic nerve itself, especially in the lamina cribrosa. The œdema of the lamina cribrosa causes a compression of the central vessels and as the diminished caliber of the central vein fails to return the blood, we get a venous stagnation and swelling of the optic nerve. At the scleral ring we may have even an incarceration or strangulation followed by a high degree of œdema.

Ophthalmoscopically, in choked disk the swelling is considerable but stops suddenly at the margin of the papilla; sometimes we notice a hyperæmia of the retinal veins.

In neuritis descendens the papillary swelling is small while the exudation causes a discoloration of the disk and extends into the retina giving us the picture of a neuro-retinitis.

These two forms of neuritis cannot be strictly differentiated, as they pass frequently one into the other.

The eye, for purposes of study, can also be considered inclosed in a capsule containing fluid. The contents of this capsule exert a pressure upon its inner surface, which, according to hydrostatic laws is transmitted with equal force upon every part, and the lamina cribrosa as its weakest point shows the earliest sign of an augmented tension. The crystalline lens is held in position by the zonula zinii forming a diaphragm, which divides the inner contents of the eye ball and under normal conditions is elastic and may be pushed either way. Augmented tension with the zonula zinii drawn tense, etc., as frequently happens, pressure may vary in the aqueous from the vitreous humor. This does take place when the aqueous humor escapes and the lens is pushed forward, the difference in pressure of the vitreous increase filtration and refills the anterior chamber. Deutschman argues that repeated paracentesis causes an increased metabolism of the vitreous, an observation which might be of use in the treatment of its diseases. The contents of the eye ball with a variable volume are the aqueous and vitreous humors but it is principally the blood which by increase or decrease in blood pressure in the inner coats of the eye may cause a corresponding change in intra-ocular pressure. Under physiological conditions there are small variations. Temporary influences which raise the pressure in the entire vascular system are balanced by an increased outflow of fluids from the eye.

Glaucoma is a disease characterized principally by increased intra-ocular tension, by the excavation of the optic disk and the disturbance of vision consequent upon these morbid changes. Augumented tension and an excavated disk without a previous disease to account for them, is called primary glaucoma, when another intra-ocular disease is present, secondary glaucoma.

Primary or real glaucoma generally affects both eyes, even if not at the same time, while secondary glaucoma is limited to the eye which gave rise to it.

Among the many theories advanced to account for the increased intra-ocular pressure in glaucoma those of Grafes Doudens, Stellevog, Knies and Weber are the most important but they fail to give a suitable explanation for all cases. The theory of Weber refers increased tension to an obstructed excretion, retaining an increase of fluids within the eye. At present this theory has the largest number of adherents.

As the chief factor in the development of the glaucomatous process we must regard the senile degeneration and dilatation of the uveal vessels, a condition found in nearly all cases by pathological anatomy. These vascular changes in the capillaries, principally of the interior portion of the uveal tract, produce a chronic increase in the volume of the blood, causing a slight transudation and increased escape of fluids and plastic elements into the anterior half of the bulbus. Consequently we have an increase intra-ocular pressure with its consequences. In this manner we obtain a typical glaucoma. But augmented tension as in attacks of severe iritis, for instance, and glaucoma, are by no means identical conditions. A correct diagnosis of glaucoma is of the greatest importance as an early therapeutic interference may save the sight of the patient. To enable us to do this we must take into view a number of conditions. We cannot rest the diagnosis of glaucoma upon a single symptom.

Attacks of hemicrania with gastro-febrile symptoms should warn the physician to look for the possibility of a glaucoma and make a thorough examination of the eye. After these symptoms we may have an increased tension of the eyeball, loss of corneal sensibility, enlarged pupils, diminished accommodation and a shallow anterior chamber. The optic media become cloudy.

Inflammatory glaucoma may be mistaken for iritis or iridocyclites and a treatment with atropia can do great harm. The frequent indiscriminate instillation of atropine, or even homatropine and cocaine in eye diseases, cannot be too strongly discouraged, especially in elderly people. To differentiate between an inflammatory glaucoma with ciliary injection, a discolored iris, and iritis, leaving augmented tension aside, in iritis we have a contracted pupil, in glaucoma it is dilated.

Atropine should only be used when directly indicated and stopped when the desired effect is obtained. Simple glaucoma without any inflammatory signs may be diagnosed for a beginning cataract when no ophthalmoscopic examination is made.

When increased intra-ocular tension is found as a complication of another pre-existing disease, it is termed secondary glaucoma, and here we can observe the characteristic consequences of a primary glaucoma.

NOTE ON THE HYSTERICAL CONCOMITANTS OF ORGANIC NERVOUS DISEASE.*

By C. H. HUGHES, M. D.,
ST. LOUIS, MO.

The conclusion, "Some hysteria, *ergo* all hysteria," is a clinical conclusion which has proven in numberless instances fatal to correct diagnosis and to the welfare of many patients.

This neurosis may be latent as any other inherent tendency to neuropathic instability may be and often is, until some physical or pathological cause calls it into morbid activity. While hysteria is essentially an imitative and functional disturbance of the psychomotor, sensory and ganglionic centres, it is no more unreasonable to expect its development in conjunction with grave organic lesions of the cord or brain, than to anticipate pain or spasm from profound central disease or even from multiple neuritis of the motor nerves extending to the cord centers or involving contiguous peripheral sensory nerve fibers.

The time has fully come, in the progress of neural pathology and clinical neurology, to recognize this fact and realize its true significance in our clinical judgments, for without such proper recognition we may be too often led astray in diagnosis and prognosis for our patient's welfare or our professional reputations before a scrutinizing and discerning public. Hysterical patients are prone to develop peculiar inherent neuropathic characteristics of their organism under physical as well as psychical stress and this physical strain may be a real central or peripheral structural disease.

It has been quite a number of years since the writer first began to think in this way and ample observation has confirmed the correctness of his earlier judgments, though not until after some serious clinical errors had been recognized after the issue had been determined post-mortem.

So far back as 1867, 1868, 1869, 1880 and 1881, several of my autopsies at the Fulton Asylum for the Insane on patients who had died of organic disease of the brain and other organs, some of whom had been pronounced only hysterical in the communities from which they came and one or two of whom had hysterical seizures while they lived in the institution, set the author to thinking on this subject and led to a final revision of his previously entertained view that hysteria was always a functional nerve trouble.

It was not long after leaving the asylum that a very markedly instructive case, because of its tragic ending, fell under our observation.

The case was that of a lady past the menopause, and mother of several grown children, who suffered from disseminated sclerosis, with characteristic pupillary changes, intention tremors and insomnia, and with numerous hysterical symptoms and frequent paroxysms.

Her case had been pronounced by old and experienced physicians to be hysteria and hypochondria (which latter, by the way, is another much misapplied term because it, too, does really, though less frequently, co-exist with grave physical lesion).

A multiple neuritis co-existed in this case and she had exacerbations of neuralgic pains.

This woman really suffered physical agony, but the verdict of her family physician and a consultant from the city that the case was hysteria, lost her the sympathy of her husband and children which she deserved and craved, and in her despair, chagrin and grief she took her life.

Thos. Buzzard, in his presidential address before the London Neurological Society in January, 1890, has caught a glimpse of our subject in a little different light. The essay as since published by Churchill, of London, is entitled, "The Simulation of Hysteria by Organic Disease

*Read before the Neurological Section of the American Medical Association.

of the Nervous System." In this little brochure the fact has not escaped this able clinician's observation that hysterical symptoms may co-exist with even so grave an organic disease as disseminated sclerosis, but he thinks it is the sclerosis which causes symptoms which simulate hysteria, whereas we think the hysteria is real and the sclerosis is the *casus mali* that brings into prominent morbid activity the latent functional neurosis.

He even makes certain hysterical symptoms a necessary part of the organic disease he is discussing. We quote: "It appears to me reasonable to conclude that many symptoms which have come to be considered characteristic of hysteria will, if examined in the light of improved knowledge and experience, be regulated to disseminated sclerosis. The figure of hysteria shrinks in proportion as the various forms of organic disease acquire greater solidity and sharper definition."

But we have not always found this to be strictly true except as the fatal ending of disease approaches. We have in view one instance in a male which though death is impending from probable syphilitic and gummata with cerebral congestion, the patient has numerous crying spells with spitting out of food and medicine and violent tendencies at times followed by laughter and tranquility. The congestion of brain has evidently a malarial complication with cold stage, fever and sweating, reaction and intervening better days.

Buzzard's book is good reading *a propos* of our subject and bearing in mind the difference of view, viz., that in our opinion the hysterical symptoms are always brought to the surface in persons who have this neuropathic diathesis and in no others by the irritation of an organic disease, while Buzzard regards the hysterical symptoms as necessary signs of the organic disease. He has found hysterical symptoms in Frederich's ataxia and secondary cancer. We have one of the latter cases now under treatment or rather as a sequence to a second removal, the patient having, also, been really insane with delusions of electricity, etc., and periodicity of exacerbation as of malarial poisoning.

He details a case of hysterical paraplegia dependent on atrophy of the illio-psoas muscle and a number of cases of disseminated sclerosis mistakenly diagnosed as hysterical, one of them in a male patient and one case like our own terminating fatally.

We remember to have seen one case of posterior sclerosis in a female in which the pharyngo-laryngeal crises were so distinctly intermittent and the sensation of globus was so like that of hysteria that we were often uncertain as to whether the patient did not really have the true globus hystericus from the irritation of the changes in the pons and medulla and the reflected gastric crisis. She had other hysterical symptoms and had in her earlier life been a victim of this neurosis spasmodic. She died however in a cardio-laryngeal crisis.

In the recent publication of the Salpetriere Cliniques,* Volume I, 1892, Charcot relates a case of Morvan's disease complicated with hysteria and several cases of hysterical tremblings having associated variations of intention tremor and vibratory tremor. These were probably, as they were apparently, associated with sclerosis.

Five days ago a lady now dead of cerebral congestion, came to my office at the instance of Dr. Mayger of this city with general hysterical trembling. Her history had been one of mental shock and over nerve strain.

I have seen a case of abscess of the cerebrum following a cerebritis preceded by hysterical symptoms till near the close, and a school teacher of twenty-two years overworked and anxious about her ability to continue teaching developed hysteria along with general neurasthenia and malarial poisoning, the latter ending in cerebral congestion, temporary insanity and death—the hysterical symptoms disappearing as the gravity of the cerebral increased.

Hysteria sometimes displays itself in connection with epilepsia mitior as well as in the grave form of hystero-epilepsia. It has been developed in my observation after diphtheria, scarlatina and rheumatism. In these instances I have always found a family history of this or other form of spasmodic neurosis. It is not uncommon

*Clinique des Maladies du Systeme Nerveux, M. le Professeur Charcot pendant les annees 1889–90 et 1890–91 sous la direction de Georges Guinon Chef de Clinique. Publications du Progres Medical.

"Relation d'un cas type de maladie de Morvan complique d'hysterie. Superposition des anesthesies hysteriques et de Morvan chez le meme individu."

in ordinary chorea especially later in life after an earlier chorea, one of my present cases of chorea major shows hysteria markedly. But these are both ordinary functional nervous diseases.

I think I have seen it in one instance brought out during the convalescence from hemiplegia as chorea sometimes appears.

With these clinical facts before us, are we not justified in extending our search for hitherto unsuspected organic disease of the nervous system as causes of hysterical symptoms, as well as in looking to the womb for the fountain source of this symptomatic neurosis and in relegating to the back-ground the prevailing clinical dictum that, "Where hysterical symptoms present, the trouble is only a functional one of the nervous system?"

It is undoubtedly true, as Buzzard has clearly shown, that hysterical symptoms develop *de novo* only in part and as part of the expression of organic nervous disease. I have seen such cases—cases where the mind was for quite awhile in doubt as to the real nature of the disease—whether organic or functional. As one may see paralysis appear and find the cincture feeling present and the knee jerks absent in hysteria sometimes, so may he see symptoms of hysteria in real organic disease. I may note here a case of salam tremor or rhythmical contractions of the sterno-mastoids, long suspected by myself to have been hyterical, which proved to have been caused by cervical pachymeningitis of which the patient subsequently died.

As this is but a note of clinical warning we trust this word may prove sufficient to the wise clinician and with a brief quotation slightly qualified to compass our own view we close this paper as Buzzard has introduced his able address, our object being, "to draw attention to the frequency with which symptoms liable to be looked upon as (solely) hysterical are found to be really due to structural changes in the nervous system" as the exciting if not solely causative factor.

ANTIDOTE TO PHOSPHORUS.

In cases of poisoning by phosphorus Bokai and Korányi recommended a 1-5 to 1-3 per cent. solution of potassium permanganate. Brought in contact with this, the phosphorus is transformed into harmless orthophosphoric acid.

Correspondence.

LETTER FROM A SPECIAL CORRESPONDENT.

LONDON HOSPITALS AND WANT OF FUNDS.

I find that London suffers from the same difficulties that we do in Philadelphia, in spite of all its wealth; namely the want of funds to sustain the hospitals. The various appeals which have been made by means of friends and the press, with concerts, flower-shows and all the ordinary measures to obtain sufficient means for sustaining them, have failed, and more recently they have adopted the Hospital Sunday Collection for which there was on the tenth day of June an appeal made by the various clergymen to their congregations for funds, yet, according to the *London Times*, the Hospital Sunday has not become the entire success which it promised to be in the beginning.

It is stated that apparently, some people imagine that by giving on that day, they free themselves from the necessity of extending further assistance to the associated physicians and surgeons.

Each Hospital should receive a certain amount 'per capita,' or patient when they have been treated as an in-patient, and for out-door relief there should be a small sum paid by each patient for medicine, which, if judiciously employed, will almost entirely defray the expenses attending upon this class of cases.

SALARIED RESIDENT HOSPITAL PHYSICIANS.

Another subject has recently been discussed by the medical press of England, namely, salaried hospital physicianship, owing to the difficulty of obtaining the services of a resident honorary physician. This is especially the case in agricultural districts, but it holds good in small hospitals in cities, especially in poor neighborhoods. It has been noticed that since the appointment of a salaried physician the income of the hospital (more especially at Colchester) has steadily increased and more than pays the thousand dollars salary.

The following statistics show the fluctuations in the hospital income and work for two years preceding, and the four years succeeding, the change:

	Hospital Saturday Collections.	Hospital Sunday Collections.	Annual Subscriptions	Out-patients' Fees, 1 s. per Letter.*	Total Income of Hospital.	Number of In-patients admitted.	Number of Out-patients treated.
	£	£	£	£ s.	£		
1886	468	416	918	41 7	2782	531	1535
1887	491	409	882	35 19	2748	503	1418
1888	537	406	906	50 4	2847	554	1726
1889	568	414	905	62 13	2882	623	1987
1890	606	431	919	52 1	2960	585	1814
1891	693	451	896	56 2	3179	687	1992
†Increase since change	202	42	14	21 0	431	184	574

—*The Provincial Medical Journal, May 2d, 1892.*

EARNINGS OF DOCTORS IN ENGLAND.

Mr. Goschen, Chancellor of the Exchequer in 1892, drew a very roseate picture of the earnings of professional men, lawyers and doctors, in England, when he compared the income derived from them with what he received with cotton spinners. Some of the lay papers have already drawn attention to the fallacy contained in his budget speech. As regards medicine we need only say that it has been repeatedly proved that the income of the medical men does not exceed 200 pounds sterling, or $1000, a year, and out of this must be paid rent, taxes, rates, the expense of the household, of horse, carriage and groom, and all other items incidental to existence.

The money in each locality is returned to the butcher, baker, tailor and when the practitioner enjoys a larger income, he makes a much larger return to the community amongst which he lives in the increased style in which he lives.

An income of $1000 a year, presuming that a medical man is married and has children, does not allow of extravagance in living.

The moiety of income tax due upon that sum becomes a very great tax for the practitioner, and is one which he cannot well afford to pay.

LAWRENCE TURNBULL, M. D.
London, England, June 12th, 1892.

* One shilling is paid by each out-patient, on admission, the letter lasting three months.

† The total increase, therefore, from the four first-named sources, is £279, so that after paying the physician's salary a sum of about £80 comes into the general hospital funds from these sources.

Selected Formulæ.

THE TREATMENT OF TAPE-WORM BY THE EXTRACT OF MALE FERN.

The administration of male fern in the treatment of tape-worm is reviewed in the *Province Medicale*, No. 4, 1892, *Journal de Médecine de Paris*, May 1, 1892, as follows:—

1. Crequy's prescription:

℞ Extract of male fern.....8.00 grammes.
Calomel.....0.80 gramme.
M. and put into eight capsules. Sig.—Two capsules every ten minutes.

2. Peschier's formula:

℞ Extract of male fern .....2.50 grammes.
Gum arabic.....1.25 grammes.
Powder of tin.....1.25 grammes.
Calomel.....0.60 gramme.
Medicinal soap.....0.60 gramme.
Powder of fern root.....q. s.
M. and make twenty pills. Sig.—Ten pills at ten o'clock at night, and the other ten an half hour afterwards.

3. Madame Nuffer's formula:

℞ Powder of male fern..... 6.00 grammes.
Water.....125.00 grammes.
M. Sig.—To be taken at once in the morning, before breakfast, to be followed one hour afterwards by a purgative, such as calomel or scammony.

4. For children:

℞ Ethereal oil of male fern.... 0.50 to 1.00 gramme.
Calomel..... 0.50 gramme.
Water.....15.00 grammes.
Powdered sugar.....15.00 grammes.
Gelatine..... q. s.
M.

—*Jour. de Médecine de Paris*, May 1, 1892.

FOR CONSTIPATION.

℞ Aloin.....1¼ centigrammes.
Extract of belladonna.....6 milligrammes.
Ipecacuahna.....3 centigrammes.
Strychnine.....1 milligramme.
M. and make one pill. Sig.—Night and morning

—*Jour. de Médecine de Paris*, May 1, 1892.

IN CHLOROTIC DYSMENORRHŒA.

The following combination is recommended by Monin (*Jour. de Médecine de Paris*, May 1, 1892):

℞ Tincture of balm-mint.
Tincture of saffron.
Tincture of iodine, of each.....15 grammes.
M. Sig.—Twelve drops before the principal meals. Every eighth day a warm bath, to which 125 grammes of chlorhydrate of ammonium should be added.

ANALGESIC MIXTURE.

As an analgesic combination the following is recommended (*Jour. de Médecine de Paris*, May 8, 1892):

℞ Menthol.
Chloral.
Camphor, of each.....10.00 grammes.
M. until liquefacation takes place. Sig.—Apply locally in toothache, rheumatism and neuralgia.

THE THERAPEUTIC USES OF CHLORHYDRATE OF AMMONIUM.

In reviewing the therapeutic uses of chlorhydrate of ammonium, Ch. Liegeois (*Rev. Gener. de Cliniq. et de Therapeutique*, April 30, 1892) recommends the following formulæ:

1. In convalescence of *typhoid fever*:

℞ Syrup of marshmallow.....250.00 grammes.
Syrup of squill..... 32.00 grammes.
Ammoniated gum.
Wine of antimony.
Chlorhydrate of ammonia, of each, 8.00 grammes.
M. Sig.—Several spoonfuls during the day.

2. In *Dysmenorrhœa:*

℞ Chlorhydrate of ammonia.....300.00 grammes.
Water..... 6.00 grammes.
M. Sig.—A dessertspoonful, night and morning, before the arrival of the period.

3. In chronic *pelvic peritonitis:*

℞ Chlorhydrate of ammonium..... 50 grammes.
Simple syrup.....500 grammes.
M. Sig.—One to five dessertspoonfuls a day, taken at meal time, in a little water.

4. As an *antiperiodic:*

℞ Powder of red cinchona bark.
Chlorhydrate of ammonia, of each, 4.00 grammes.
Syrup of puinpuina..... q. s.
M. Sig.—One half to be taken immediately after the access, the other half six hours before.

THE TREATMENT OF PRURITUS.

The following combinations are recommended in the treatment of the different forms of pruritus (*Jour. de Médecine de Paris*, May 8, 1892):—

1. Doyon's lotion:

℞ Oil of almond.....500.00 grammes.
Corrosive sublimate..... 0.20 gramme.
Chloride of ammonium..... 0.25 gramme.
M.

2. Vidal's lotion:

℞ Rose water..... .....250.00 grammes.
Hydrate of chloral..... 8.00 grammes.
M. Sig.—After the lotion, some starch is applied.

3. Hardy's ointment:

℞ Vaseline.....20 00 grammes.
Cyanide of potassium..... 0.10 gramme.
M.

4. Besnier's ointment:

℞ Vaseline.....30.00 grammes.
Cocaine..... 0.30 gramme.
M.

5. In pruritus of pregnancy:

℞ Warm peppermint water.....1 glassful.
Borax.....4.00 grammes.
Essence of allspice.....5 drops.
M. Sig.—Apply with a soft sponge.

6. In eczematous vulvar pruritus:

℞ Olive oil.....30.00 grammes.
Iodoform..... 0.25 gramme.
M. Sig.—Locally applied.

7. Persy's formula:

℞ Phenic acid..... ..... 1.30 grammes.
Tincture of opium..... 15.00 grammes.
Hydrocyanic acid..... 7.50 grammes.
Glycerine..... ... 15.00 grammes.
Distilled water.....120.00 grammes.
M.

8. P. Menier's formula:

℞ Pulverized talc.....15.00 grammes.
Bichloride of mercury..... ..... 0.50 grammes.
Dried extract of valerian ..... 2.00 grammes.
M. Sig.—Apply twice or three times a day.

RESECTION OF THE OS CALCIS AND ASTRAGALUS.

Dr. Bogdanik describes the following procedure: The operator stands on the right side of the patient, and makes an incision beginning closely beneath the external malleolus, if the operation is performed on the left foot, but beneath the internal malleolus if on the right. The incision penetrates to the calcaneum and extends obliquely downwards and backwards, in the direction of the annular ligament and at a distance of one centimetre from the sole of the foot, toward the other malleolus. The calcaneus is sawed through in the same direction, while the foot is pressed by an assistant against the leg. As soon as the bone has been divided the foot can be readily folded back, so that the dorsum is in contact with the anterior surface of the leg, permitting an inspection of the ankle joint. The astragalus can now be grasped with bone forceps and removed with knife and scissors. It is of advantage to prolong the incision over both malleoli in the direction of the tendo Achilles, because this enabled us to draw upward the upper portion of the calcaneus. It is further advisable to retract the arteries and tendon with blunt hooks so as to prevent their injury by the knife. If the calcaneus is diseased the affected portion may be chiselled out, curetted, or, if necessary, the entire bone may be removed. After the removal of the astragalus the articular surface of the tibia and fibula can be readily brought into view.

The author has performed this operation on two patients and claims for it the following advantages:

1. The incision in the soft parts is small.
2. Injury of the vessels, tendons, muscles or nerves is avoided.
3. The situation of the scar is favorable.
4. Configuration of the foot is preserved.

—*Centralbl. f. Chirurgie,* No. 3, 1892.

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Leading Articles.

THE THERAPY OF ABORTION.

There is considerable difference of opinion upon many points regarding the therapy in cases of abortion where part or all the fœtal matter is retained within the uterus. While Winckel and other authorities both in this country and abroad suggest in such cases in which there is no fever, putrid discharge or hæmorrhage an expectant treatment, on the other hand Schrœder, Olshausen, Fritch, Veit and many others lay great stress upon the necessity of the immediate removal of the ovum and decidua. An important paper on this subject has appeared from the pen of Dr. Kuppenheim in the *Deutsche med. Wochenschrift.* He reports the results obtained and the therapy used in 84 cases of abortion treated in the Women's Clinic of Heidelberg, and his article has been discussed editorially in a recent issue of the *Medicinische Neuigkeiten.*

The course of seven cases out of these eighty-four cannot properly be taken into consideration, as only a single rise of temperature to 38° and 39° C. characterized an unusual condition of the patients. In seven other cases the patients when they came for treatment already had high fever, and were severely ill in consequence of the delay of proper treatment; one, indeed dying from sepsis. In these eighty-four cases digital removal of the ovum and decidua was practiced thirty-two times, and the curette was used in fifty-two cases. Three out of the first group and four out of the second succumbed.

Prior to the digital removal, the vagina, cervical canal, and if possible the uterus, should be syringed or washed out with a proper antiseptic solution such as a three per cent. carbolic acid solution or a 0.25 per cent. solution of bichloride or mercury, and a similar washing should be pursued after the operation.

The curette was used in cases of retained ovum in the second and third months of pregnancy, and only in the later months when after the digital removal of the ovum a retention of a portion of the decidua was suspected. The curette was always used with the patient in the Sim's position, after careful disinfection of the parts, and without anæsthesia. Recumier's curette was generally employed. The remnants of the decidua are scraped away with the curette in closely-lying parallel lines, care being taken not to injure the entrances of the tubes. Especially during the first three months of pregnancy, when the narrowness of the cervix precluded the possibility of digital removal without dilatation of the cervix, the operation of curetting is preeminently adapted for this purpose. In many cases, even after the digital operation has been sucessfully carried out, the curette will bring away shreds of membrane, and it is very often these that cause the most severe hæmorrhages. As a most important advantage of the curette, Kupperheim speaks of the fact that for its use the cervix need not be dilated. Another advantage is that its use causes but very little pain, so that the operation can safely be undertaken without anæsthesia. Kuppenheim is of the opinion that the danger of perforating the uterus by the curette is decidedly exaggerated by the majority of gynæcologists.

Regarding the other therapeutic means employed, we must mention that of cauterization with a ninety-five per cent. solution of carbolic acid. This was used by Kuppenheim in all cases that came to the clinic in a state of infection. The carbolic acid is applied by a sound with a pledget of cotton wrapped on the end, or with a piece of cotton held in a polypus forceps. The results of this treatment were, that in six cases the fever fell at once, and in one case a pelveo-peritonitis ceased. The cauterization with carbolic acid has other advantages, it stimulates uterine contractions and acts beneficially in checking existing endometritis.

For the checking of hæmorrhage consecutive to abortion, Dührssen's application of chloride of iron has long occupied a position of prominence; the iodoform gauze tampon will, however, usually be found of greater service.

The after-treatment consists besides a confinement to the bed for eight days, in vaginal douches and the administration of ergot.

Briefly summed up, Kuppenheim's belief is that during the first three months of pregnancy the fœtal remains should be removed manually and with the curette; that in the later months the manual method alone may often prove efficient in itself, and that the placenta should always be removed manually, but fragments of the same can only successfully be removed with the curette.

APPLICATIONS OF COLD IN TRAUMATIC SURGERY.

"It is to be regretted," says Dr. Buch, in a recent number of the *St. Petersburger med. Wochenschrift*, "that while we are fully aware of the valuable properties of cold applications in allaying pain and inflammation, yet we believe ourselves unable to apply it in the very instance where it would prove most useful." Dr. Buch refers to those cases in which the affected parts are covered with an antiseptic dressing or plaster of Paris bandage, and in which the local dressings hinder a direct cooling of the part.

According to Buch's experiences the procedure suggested some time ago by Winternitz is far too little known, and even to a less extent adopted. It consists in a method of cooling the affected limb without necessitating the removal of either dressing or plaster of Paris bandage, and is especially applicable when the injury is in the lower half of the extremity.

Winternitz's experiments have conclu-

sively demonstrated that if the upper part of an extremity be surrounded with ice, the blood-vessels of the entire limb contract. Winternitz explains this effect by a direct action on the vessels, and upon the nerve branches. Buch, however, ascribes the result to a reflex action, for it frequently suffices to place a single piece of ice upon any portion of the upper part of the arm to affect the temperature of the entire arm several degrees.

Winternitz did not fail to recognize the practical value of his discovery and invariably used ice applications as described in connection with the local dressings, and found that by so doing he was able to completely check the inflammation in the parts. The method has not, however, received the attention it deserves. Buch has, where possible, used the central applications of cold in connection with the local, and has obtained, thereby, far more gratifying results than when only local applications were employed. But in other cases, as has been mentioned, where a permanent or fixed bandage precludes the direct use of cold, the application above the dressing then of course is the only one feasible. Buch has obtained the most brilliant results for the past few years in this way. Since he adopted it he has been able to keep iodoform dressings in their place which otherwise on account of the pain they produced would have had to be removed. As soon as the wound began to be painful, Buch would apply a cold pack, or if possible an ice-pack, above the dressing, and found that invariably within a short time the pain would cease, and discovered that by this means he could guide the reaction of the wound at will.

The same holds good for fractures of the extremities. Buch is positive that in many cases the plaster of Paris splint was well-endured solely on account of the presence of the cold above the wound. During the preparation of the splint he applied extremely cold applications to the entire limb in order to reduce the temperature of the parts as much as possible, and as soon as the bandage has been applied, continues these applications above the bandage. In any case, as soon as the plaster splint causes pain, he applies an ice-pack above the splint, whereby he has always been able to control the pain and, in connection with an elevated position of the limb, also prevent the dangerous swelling so often seen.

Buch also lays stress upon the technique of this method, and agrees with Winternitz that *wet* cold is much more efficient than dry cold. Therefore, if the ice-bag is used it should not be placed dry upon the skin, but laid upon a wet compress.

It does seem strange that a method so simple and efficient should not have had the universal adoption it deserves. The use of cold in surgery and medicine will unquestionably be one of the important therapeutic measures of the future.

ON NYSTAGMUS IN AFFECTIONS OF THE EAR.

Dr. Michael Cohn has observed four cases of nystagmus occurring during the course of aural diseases. In Case *I*, of purulent otitis media, the nystagmus was easily produced by the external or internal douche, or even by slight pressure on the tragus of the diseased ear. If a plug of cotton was inserted, pressure on the tragus did not produce the nystagmus, which was horizontal in character and accompanied by vertigo. The purulent discharge soon ceased, but the nystagmus kept on. After electrical treatment it soon disappeared, although the discharge reappeared. In Case *II*, the nystagmus and vertigo were produced by injection of warm solutions. Vertigo also appeared on hearing music. In Cases *III* and *IV* it was caused by the injections of cool solutions. After a discussion of the various theories proposed, the author reaches the conclusion that attacks are most probably caused by an irritation of the semi-circular canals, rather than by a direct irritation of the brain.—*Berlin Klin. Wochensch.*, No 43, 1891.

Book Reviews.

PRACTICAL MIDWIFERY. A Hand-book of Treatment. By Edward Reynolds. Fellow of the American Gynæcological Society, of the Obstetric Society of Boston, etc. Assistant in in Obstetrics in Harvard University, etc., etc., 8vo, 424 pp.. 121 illustrations. New York: Wm. Wood & Co. Price, $2.50.

Few men are better qualified to compile a manual of practical midwifery than the author of this well-written treatise upon the management of labor and the after-treatment of the woman; for he has brought to the task the learning of a large experience and the capacity to well-express his thoughts.

The author does not intend the work to be anything more than a practical manual of the practice of midwifery, wholly in accord with our latest ideas on the subject.

The arrangement of the volume is largely a natural one in dealing with obstetrical medicine, the parts of the book being arranged as follows: pregnancy, normal labor, obstetrical surgery, abnormal labor, the pathology of labor, and the puerperium. The chapters are grouped under the above headings, so that as a useful ready-reference book it will prove of much value to the busy worker. The first chapter enumerates briefly and clearly the essential facts concerned in the diagnosis of pregnancy. Following this the functional disorders of pregnancy and the care of normal pregnancy are considered, this being succeeded by a chapter on normal labor. All discussion of theoretic knowledge is rigidly avoided, and the chief usefulness of the book is in this very fact, which has resulted in the production of a manual containing simply the best and most modern ideas upon the subject of midwifery and surgical obstetrics.

The illustrations deserve mention: in general they are very good and clearly illustrate the points needing emphasis in a work of this character.

We predict for this admirable manual a most cordial reception.

CEREBRAL SCLEROSIS, OF SPECIFIC ORIGIN.

Prof. De Costa prescribed:

℞ Potassii iodidi.....gr. x.
Hydrarg. bichloridi.....gr. 1-40.
Syrup. sarsaparillæ.
Aquæ, āā ad. f3j.—M.
Sig.—Three times a day.

Periscope.

THERAPEUTICS.

ACTION OF OZONE ON THE ORGANISM.

Observers are now agreed in regarding the effects of oxygen on the system as due to its partial transformation into ozone. MM. Labbe and Oudin have concluded a series of interesting experiments bearing upon the physiological action of the latter substance. They found that ozone increases the amount of hæmoglobin in the blood by about 1 per cent. This increase is chiefly in the case of anæmic subjects, whose blood contains only 10 or 11 per cent. of hæmoglobin; individuals having a normal proportion of the latter, 13 to 14 per cent. are unaffected by treatment by oxone.

TREATMENT OF ATHEROMATA.

Lutz (*Monatsheft. f. prak. Dermat.* No. 12., Vol. XIII, 1891.) recommends that atheromata, which have suppurated and those which are thin-walled and very adherent, should be treated by *incision*, the contents are evacuated, the cavity lightly scraped with a curette and then painted with tincture of iodine. He had wonderfully good results and found it much easier and satisfactory than the treatment by *excision*.

ANTIPYRIN IN INCONTINENCE OF URINE.

In a thesis on this subject, Dr. Gaudez has shown the good effects obtained from the use of antipyrin in cases of idiopathic incontinence of urine in children. The author reports 29 cases—14 children completely cured, 12 improved, and 3 unrelieved.

The antipyrin is given either in cachets or in solution, but in either case a small quantity of soda bicarbonate is added to each dose. The dose of antipyrin varies from 1.50 to 4.00 grammes (22 to 60 grains), according to the age of the child. These doses are given in the following way: 0.50 to 1.00 gramme (7½ to 15 grains) at 6 o'clock in the evening; a second dose at 8 o'clock, when the child goes to sleep.

M. Gaudez insists strongly on the hours at which the medicine is given. Sometimes, if the last dose is given at 8 P. M., the child may have involuntary micturi-

tion about 5 A. M.; but if the last dose is given from 9 P. M. to 11 P. M., the incontinence disappears entirely.

These good results of antipyrin have been observed very often from the first day of its use; it is not generally necessary to continue the treatment with antipyrin longer than a fortnight to obtain a permanent cure.—*Gazette des Hôpitaux,* November 17, 1891, p. 1238.

THERAPEUTIC USES OF METHYLENE BLUE.

Constantin Paul (*Sem. Mèd.*, December 30th, 1891) says Desnos's experiments with methylene blue in cases of locomotor ataxy have shown that patients can without inconvenience take as much as 30 centigrammes of the drug daily, and that even when it was given in smaller doses the urine was intensely colored. C. Paul himself found that a dose of 10 centigrammes colored the urine till the third day. After a dose of 5 centigrammes the urine was still colored on the following day, and even to a slight degree on the day after. Gradually lessening the dose, he found that after 2 centigrammes the urine was distinctly colored, and had not entirely regained its normal appearance the next day. Methylene blue being absolutely harmless, C. Paul thinks its administration affords a reliable means of satisfying oneself whether patients are taking the remedies prescribed for them, which may be of practical use in prisons, lunatic asylums, etc. He further hints that the drug may also be employed by way of "suggestion" in order to convince neurotic patients of the efficacy of the treatment which they are undergoing, and as a useful *placebo* when the practitioner wishes to try the expectant method without taking the patient or his friends into his confidence.—*Brit. Med. Jour.*

ON THE EFFECTS OF CHLOROFORM.

L. E. Shaw, M. D., (*British Medical Journal*, November 21, 1891.) gives an account of some experiments made by Dr. Gaskell and himself which were in accordance with those of the Hyderabad Commission. They show that when chloroform is administered without interfering with perfectly regular respiration, complete insensibility can be produced without obvious weakening of the heart's beat. Inefficiency of the heart is brought about by the rapid inhalation of chloroform in too concentrated a form. The practical teachings are that it should be administered slowly, and with plenty of air, and that great care should be taken not to push the chloroform when struggling or gasping respiration occurs.

AN AROMATIC CASTOR OIL.

Dr. Standke (*Norsk Magazin for Lægevinenskaben*, No. 3, 1892) proposes the following manner of preparing an aromatic and well tasting castor oil:

The best oil is treated with warm water several times and saccharin added. This gives a sweet-tasting syrup, which will keep as long as the original oil. If now small quantities of oil of cinnamon and the essence of vanilla be added the last remaining traces of harshness will disappear.

PIPERAZIN.

This substance in aqueous solution dissolves twelve times as much uric acid as is dissolved by the same quantity of carbonate of lithium. There is formed a neutral urate of piperazin, which is seven times as soluble as urate of lithium. Piperazin itself and also the hydrochlorate are easily soluble in water. The dose is from fifteen to forty-five grains a day. It may be prescribed as follows:

℞ Piperazin.....gr. xv.
Aquæ destil.....ʒ vi.
Syrup Aurant cort.....ʒ v. M.
Sig.—To be taken in the course of the day. To be increased gradually.

TREATMENT OF TUBERCULOUS DISEASE OF THE KNEE.

Drobnik (*Centrab. f. Chir.*, No. 11, 1892.) advocates free exposure of the interior of the tuberculous cavity, and long-continued plugging with iodoform gauze as an efficient method of treatment in cases of tuberculosis of the knee, in which both arthrectomy and resection are contraindicated, and no alternative remains save amputation of the limb. The author holds that in all cases of tuberculous disease amenable to surgical treatment, the seat of the disease should be freely exposed and kept open in order to enable the organism to reject the tissues already destroyed or undergoing necrosis. Free exposure of the tuberculous deposit is followed by a profuse secretion of fluid from the diseased

tissues, which drives away the necrosed parts from the immediate neighborhood of the wound, and at the same time establishes in the surrounding tissues increased vital energy, and a more energetic resistance to the attacks of the morbid agents. This discharge continues until the inner surface of the exposed cavity is lined by a thick layer of healthy granulations. In cases in which there are two or more cavities near the joint, the author would make a large opening into each. This method is indicated only in cases of osteal tuberculosis of the knee-joint, and in those in which progressive and destructive disease of the bone necessitates surgical interference. Cases of primary synovial tuberculosis, and of secondary synovial infection in consequence of the communication with the joint of one or more small osseous cavities, are best treated, after the failure of conservative measures—such as extension, rest in splints, and injections—by arthrectomy.—*British Medical Journal.*

GLYCERIN SUPPOSITORIES WITH BORIC ACID.

The use of boric acid as a laxative, when introduced into the rectum, having recently been advocated, Mr Peter Boa thought of employing the Glycerinum Boracis of the British Pharmacopœia. For the purpose of comparison he made two sets of 15-gr. suppositories, one with glycerin alone, and the other with glycerin (or as we say, glycerite) of borax. They were tried practically, and the reports (according to the *Chem. and Drugg.*) were distinctly in favor of those containing boric acid. The simple glycerin suppositories either failed to act at all or acted only very slightly, while those containing boric acid acted in some cases as efficiently as large glycerin suppositories, requiring however , a longer time.

A NEW REMEDY FOR RHEUMATISM.

At a recent meeting of the Berlin Medical Society, Dr. Paul Guttman recommended a new medicament called salophen. It is a finely crystalline substance, easily soluble in ether and in alcohol, but not soluble in water. It consist of salicylic acid and acetylparamidophenol in almost equal parts. Six to eight grammes can be given daily without injury to the patient. It has a slight anti-febrile effect.—*The Lancet.*

THE RELIEF OF VOMITING.

Kenny. (*British Medical Journal*, No. 1618, p. 16) has reported the case of a parturient woman, in whom he overcame obstinate vomiting, resistant to other means of treatment, by the application of a cantharidal blister over each pneumogastric nerve at the anterior border of the sterno-mastoid muscle.

COLOMBO IN THE CONVALESCENCE OF INFLUENZA.

An anonymous correspondent of *Le Progrès Médical*, of Paris, warmly recommends the use of colombo as a tonic and sedative in the convalescence of the grippe. The writer has found it to be an incomparable preventative and curative remedy in the gastric and pulmonary forms of this disease during the last two epidemics. The powder, decoction or an elixer may be prescribed. It causes the appetite to return, the vomiting to cease, and the stools to become regular, while the convalescence is comparatively short and insignificant.

MORPHINE AND ATROPINE.

Stickler (*Centralbl. f. klin. Med.*, March 26th, 1892) says that in cases of poisoning, the antagonism of these drugs cannot be doubted, and that the want of general recognition of the fact is due to the few opportunities of observing it. The unpleasant effects of morphine used as a hypnotic may be prevented by the addition of atropine. In some cases morphine produces excitement, and if it will be still necessary to use it, atropine will antagonize this. A subcutaneous injection of morphine lessens considerably the dilatation of the pupil produced by atropine drops, and an injection of morphine and atropine combined produces only slight dilatation of the pupil. Irritation of the skin sometimes produced by morphine is prevented by atropine. The diaphoretic effects of morphine are sometimes troublesome; they do not occur if atropine be added. On the other hand, the dryness of the skin produced by atropine is remedied by morphine. One of the effects of morphine sometimes seen, and especially in those with early paralysis of the bladder, as in tabes, is retention of urine. Belladonna antagonizes it. Morphine mostly constipates; atropine has the opposite effect, especially in chronic constipation.

In biliary and renal colic the two drugs should be combined, as not only is any obstruction to the passage of the stone lessened, but the power of propelling the stone is increased. In cases of heart disease with engorged pulmonary circulation, morphine is badly borne, whereas the addition of a small quantity of atropine does away with any disadvantages.—*Brit. Med. Jour.*

POISONING BY PILOCARPINE.

A Belgian officer, with an affection of the eyes, was treated by the injection of 2 centigrammes (⅓ grain) of this drug. Immediately his neck, and then the whole of the body, became bathed with sweat; in two or three minutes he was salivated, and suffered from cardiac oppression and difficulty of breathing; he fancied his chest was full of fluid, and afterward he expectorated some frothy mucus. The cardiac oppression lasted about ten minutes, but for two hours the patient continued to have a feeling of constriction at the pit of the stomach. During this time he suffered from lachrymation, running from the nose, gastralgia, and nausea; he vomited three times, and passed his urine involuntarily. The intestinal peristalsis became violent, and he had tenesmus. His eyes were fixed, and he could not recognize any one twenty centimetres (eight inches) distant. The pulse was quick and small, the sufferer being in a condition bordering on collapse. By means of internal and external stimulants the symptoms disappeared.—*The Lancet*, February 6, 1892, p. 329.

CORONILLA.

M. V. Poulet (*Bulletin Général de Thérapeutique,* 1891, No. 46, p. 481) gives the result of his studies. The tincture of the entire plant was used in daily dosage of from one to two and a half drachms, believing that it was valuable in paroxysmal tachycardia, in the painful phenomena of certain reflex cardiopathies, in the disorders occasioned by changes at the aortic orifice; it relieves the symptoms due to lesions of the mitral valve; that it cuts short, frequently in a remarkable manner, the attacks of cardiac or bronchial asthma, it increases the appetite; is a tonic so far as the alimentary canal and general system are concerned. It is superior to digitalis in that it does not have a cumulative action, is not a depressant, nor does it give rise to digestive disturbances. Its chief value seems to be in the nervous affections (erethism) of the heart, whether primary, or secondary to a general neurosis, particularly in cardiac disturbances due to excess in venery, tobacco, coffee, or alcohol.—*Amr. Jour. Med. Sci.*

NERVOUS SYMPTOMS FOLLOWING THE USE OF QUININE.

Dr. A. Erlenmeyer reports (*Centralbl. f. Nervenheilk*), a case of poisoning by quinine which seems to be of some interest. Previous to this writing the author had observed abolition of the reflexes in several patients who were taking large doses of quinine, but in the case under consideration the symptoms were of an intense reflex irritability. The patient, aged forty-two years, had taken at one dose 1,0 of the drug, on the following day 2,0, in broken doses, examination of the patellar reflex at this time, by tapping and so forth, brought on a series of general convulsions with violent contractions of the arms and the whole body. On leaving off the medicament for twenty-four hours the nervous excitability would entirely disappear.

DIETETIC TREATMENT OF CARDIAC DISEASE.

Hirschfeld (*Berl. klin. Woch.*, March 4th, 1892) says that in the corpulent the diminution of fat, along with diminished weight, is accompanied by a considerable loss in albumins. All cures for obesity consist in diminished nutrition. In spite of this, certain organs gain in working power, as is also illustrated by the hypertrophied sterno-mastoid muscles in phthisis. In ordinary people, as in the corpulent, the heart muscle under such conditions maintains, or even increases, its working power. In diminished nutrition the total amount of blood is lessened. On the other hand, by the absorption of dissolved food stuffs into the circulation more fluid has to be driven by the heart. Again, when food is taken there is an increased consumption of oxygen by the glands, etc., and therefore more blood has to be sent to the organs in question. Thus, with a lessened supply of food, the amount of work to be done by the heart is

diminished, and at the same time its working power is not affected. If a valvular defect arise after rheumatism the reserve power of the heart is called upon before compensation is established. A limitation of diet is here certainly correct. It is more difficult to decide upon the value of this limitation in disturbance of compensation. The undoubted value of the milk cure is in the author's opinion due to limited supply of food. Touching upon the subject of strengthening the heart by muscular activity, Hirschfeld points out that the latter should be increased but gradually, and that the Marienbad cure as usually practiced requires of the heart too great exertion in too short a time. This over-exertion may predispose to dilatation. —*Brit Med. Jour.*

SALICYLATED COLLODION FOR THE ITCH

This has been found exceedingly satisfactory, according to a report of A. S. Rauschenberg in the *Pharmaceutical Record.* The treatment in seven cases consisted in first ordering a hot alkaline bath, to remove all grease from the skin, and then to apply to each spot where the disease showed itself a coating of the N. F. salicylated collodion, i. e., the ordinary corn cure. Each night the patient was examined for new spots, which were carefully painted as well as all those places in which the covering had become injured. The cure is completed within ten days. The advantages of this treatment are: immediate cessation of pain (the first application causes transient smarting), simplicity and cleanliness.

CEREBELLAR TUMOR.

Dr. Howard publishes in the *Australian Medical Journal* the case of a patient who had been under his care suffering from cerebellar tumor. The patient was a woman of forty, who for six months before her confinement in December had suffered from headache, giddiness, and unsteadiness in walking. Her symptoms became aggravated after her confinement; she staggered in walking, being inclined to fall to the left side. She had severe headache, worse in the occipital region to to the right of the middle line. There was no actual paralysis, her knee-jerks were normal, and there was no change in the optic discs and fundi except some venous engorgement. Death took place suddenly, and at the necropsy a round tumor was found arising from the back of the inferior vermiform process of the cerebellum, and growing forward so as to fill all the front part of the fourth ventricle. The tumor was an inch and three-quarters long and an inch and a half broad, and in structure was a mixture of glioma and sarcoma.—*Lancet.*

NUCLEO-ALBUMINE IN THE URINE.

Dr. Obermayer, in a lecture given before the "Gessellschaft der Aertze," reviewed the different forms of albumin, among which mucus was formerly designated, generally as an albuminate. According to its reaction and behavior with acetic acid, it has been more recently classed as an uncrystalline body allied to the proteids, forming a group which is easily precipitated by acetic acid, whose members are mucine, nucleine, nucleo-albumine,etc. Mucine and nucleo-albumine have been frequently found in the urine, but nuclein is invariably absent. Obermayer asked himself if the presence of nucleo-albumine was the result of morbid changes in the kidneys. With this question before his mind he had examined six cases of leukæmia in Prof. Nothnagel's clinic, and found nucleo-albumine in each case. In thirty-two cases of icterus that he examined, nucleo-albumine was present; in other diseases where the kidneys were affected or irritated by the use of irritants, such as sublimate, naphthol, pyrogallol, etc., as well as diphtheria, where it was found in a very large quantity; in scarlatinal nephritis and other acute forms of morbus Brightii, none or scarcely a trace was to be found.

In cystitis it was also found in considerable quantity. These results raised the question of a morbid origin, which Obermayer has divided into vesicular and renal nucleo-albuminuria, but leaves it questionable whether the latter is hæmatogenous or inogenous. He considers the renal nucleo-albuminuria is the result of injury to the renal epithelia, and more particularly that of the medullary, which is of clinical importance and may be found to possess diagnostic method.

THE RECENT EPIDEMIC OF INFLUENZA IN BERLIN.

Renvers (*Deutche medicinische Wochenschrift*, Dec. 17, 1891) states that the first epidemic of influenza reached its height in Berlin at the end of December, 1889. Since January, 1890, the epidemic influenza has been absent from Berlin, though there was always the temptation to call every severe catarrh influenza. During 1890 and 1891, there seemed to be a special tendency to catarrhal affections throughout the city. At the end of October, 1891, the writer observed the first typical attack of influenza again. The epidemic has developed complications in persons troubled with heart and kidney affections, and the prognosis is grave in such cases. In young children there appears to be an early appearance of heart weakness. Lung complications are very frequent. Since November 7, there were twelve cases of inflammation of the lungs, four of typical croupous pneumonia, and four or five of catarrhal pneumonia. In these there is but little dullness, usually a rapid disappearance of the fever. The sputum is tenacious and expectorated only with the greatest difficulty. He thinks that true pneumonia rarely appears, but the influenza catarrh gives a starting-point for all sorts of secondary infections of the lung alveoli. Influenza can also cause death through capillary bronchitis. There were also severe nervous complications during the epidemic. In a great part the epidemic resembles that of former years. He believes that the influenza is both infectious and contagious.—*Univ. Med. Mag.*

RETINAL BLOODVESSELS.

Dr. James Musgrove gives an account in the last number of the *Journal of Anatomy and Physiology* of a method of preparing the retinal vessels for demonstration either with the naked eye or with the lantern. His observations were carried out on the eye of the ox, but his method is equally applicable to that of other animals or of man. In the case of the ox the injection can be made quite well after the eye has been removed from the orbit. As much as possible of orbital fat and tissue should be removed with the eye-ball, and the vessels are to be cut far away. The injection is made through the ophthalmic artery with a hand syringe, and the eye should be kept in hot water for half an hour before the injection is made. When the injection is completed the eye is allowed to cool for two or three hours to allow the gelatine in the injection to set. The entire retina is then removed by cutting through the cornea and iris and removing the lens and vitreous. The retina is then found hanging down from the optic disc, and its attachment there is divided with a knife. The entire retina may thus be freed and floated out on water, and it is then spread out, with considerable trouble it is true, on glass by means of a small camel-hair pencil. The specimen is then dehydrated and clarified in oil of cloves, after which balsam dissolved in benzol is spread over it, and another thin lantern slide used as a cover glass. In this way the retinal vessels can be clearly demonstrated, and Dr. Musgrove gives a short account of their distribution, in which he found a remarkable uniformity in the different retinæ examined.—*Lancet.*

AN UNUSUAL NEUROSIS.

An interesting case of an unusual neurosis has been recorded in a foreign contemporary. The patient was a teacher, intelligent, unmarried, aged 25, with no neurotic family history. Menstruation was regular in time, but protracted in duration, and always accompanied with pain. One day her left eye was injured by a broken violin string, and as the result of this it was noticed that reading readily caused annoyance. On examination no lesion of the eye could be detected. There was considerable headache. Soon afterwards it was observed that on excitement or emotion the left half of the face flushed and became warm, and in the course of two or three seconds the left side of the face and head became the seat of profuse perspiration; the left ear became purple, and from the auditory canal there flowed an aqueous discharge. A sense of fullness was also felt in the left nostril. At the same time the right side of the face became pale, dry, and cold. If the prorocation was intense, the left arm up to the elbow-joint became red, but without perspiration. The phenomena were aggravated during menstruation. Improvement took place as menstruation was regulated, and when the constipation, which was

troublesome was relieved. Iron and aloes were the means by which a cure was effected.—*Medical Press.*

FRONTAL HEADACHE AND IODIDE OF POTASH.

A heavy, dull headache, situated over the brow, and accompanied by languor, chilliness and a feeling of general discomfort, with a distaste for food, which sometimes approaches to nausea, can generally be completely removed by a two-grain dose of the potassic salt dissolved in half a wine glass of water, and this quietly sipped the whole quantity being taken in about ten minutes. In many cases the effect of these small doses has been simply wonderful. A person who, a quarter of an hour before, was feeling most miserable aud refused all food, wishing only for quietness, would now lake a good meal and resume his wonted cheerfulness. The rapidity with which the iodide acts in these cases constitutes its great advantage.—*Mass. Medical Journal.*

CONFUSION BETWEEN RODENT ULCER AND EPITHELIOMA.

In the meeting of the K. K. Gesellschaft der Aerzte in Vienna, November 13, 1891 (*Deutsche Mediz. Zeitung*, November 19), Adamkiewicz showed as healed a patient whom he had treated, apparently undeterred by the regrettable example set by Koch, by means of injections of a secret remedy. Four days after the injection healing began, and in about six weeks the whole surface was completely skinned over. As diseased foci were still to be found at the periphery, and as somewhat rapid skinning over of the centre of such ulcers may be attained by other means, the procedure did not meet with much commendation. But what was most striking was the want of distinction made by the speakers between "epithelioma" and "rodent ulcer." Both are epitheliomatous carcinomata, it is true; but the origin, microscopic appearances, course and prognosis of these affections are so entirely different, that the confusion of the two, or at least the want of appreciation by the leading speakers, Billroth and Kaposi, of their differences, tends to bear out Unna's statement that no new growth is so misunderstood in Germany as the ulcus rodens. The case in point was obviously a typical rodent ulcer of many years' standing attacking the neighborhood of the eye and spreading on to the lids. Kaposi had himself treated the case for years at intervals, whenever the patient would present himself, but he made no reference in his remarks to an ulcus rodens, and spoke only of hautkrebs and epitheliomata, some of which grew more quickly and deeply than others. Billroth spoke of the case as one of "flat epithelioma," "which is also distinguished because it commences in more advanced age (*im höheren alter*) as lupus senilis, or, again, as ulcus rodens."

Rodent ulcer is so common in England, and we have thus so many opportunities of observing it in all stages, that it seems to us difficult to understand why our German-speaking colleagues should continue to confuse two affections which are clinically so different as to their origin, course, duration, treatment and prognosis.

POLYURIA AND SCIATICA.

At a recent meeting of the Medical Society of the Paris Hospitals, Drs. Debove and Rémond announced certain phenomena which they had observed in their cases of sciatica. In the first case they found that polyuria was present, the amount of urine passed daily, varying from 2 to 4.25 litres.

Inquiry elicited the fact that the same thing had occurred three years before when the patient had suffered from an attack of sciatica.

This led to further investigation and three other sciatic patients were found in whom a like condition was present. In one of these cases azoturia was found in addition to the polyuria.

Dr. Mathieu, having heard of these facts from his confrères, was led to make investigations on his own account, aud he also found polyuria present in two patients suffering from sciatica.

Dr. Desnos thought he had found this condition present in other painful affections, as for example in hepatic colic.

ALBUMINOUS PERIOSTITIS.

Dr. Dzierzawski communicates to the Polish medical journal, the *Kronika Lekarska*, an article on the so-called "periostitis albuminosa" of Poncet, Terrier, and Lannelongue. He has been able to find, in addition to his one case, twenty-

seven cases reported in medical literature. It is an affection of the periosteum characterized by a clear, tenacious exudation, resembling the synovial fluid or the white of egg, and it is, of course, from this circumstance that the name has been given it. Some authors, as Nicaise, Riedinger, Albert, and Duplay, look upon it as a special pathological form; while others, as Schlange, Roser, Vollert, Garrè, and Oliver, are disposed to regard it merely as a variety of purulent periostitis. Dr. Dzierzawski's own view is that it is not a disease *sui generis*, but that it is comparable to those cases of contagious osteo-myelitis where a clear fluid exudation is formed owing to a low type of inflammation, or to tubercular cases, where there are infiltrations or cold abscesses. The small number of pus corpuscles can be explained, according to Schlange, by their deficient formation owing to the weakness of the inflammation, or, according to Farrè, by supposing a secondary liquefaction of these bodies by a serous exudation. Under some conditions the periosteum may give rise to exudation containing mucus, consequently there is no need to suppose that the pus corpuscles undergo mucous degeneration, and a better name for the affection under consideration would perhaps, according to the author, be "non-purulent osteo-periostitis."—*Lancet.*

CROSS PARALYSIS.

Dr. Porter showed a brain before the Sheffield Medico Chirurgical Society, from a patient who had been under his care at the infirmary with cross paralysis. There was a small tumor on the left half of the pons the nature of which had not then been investigated. The patient, a man aged 40, was admitted with right hemiplegia and paralysis of the right side of the face, and internal strabismus of the left eye. There was never any contraction of the pupils. No anæsthesia and no affection of the fifth. The knee-jerks were exaggerated on both sides, but especially so on the right, and ankle-clonus was very marked on the right foot. The speech was slurred and laterally the tongue inclined slightly to the right on protrusion. There was a family history of both cancer and tubercle. No syphilitic history. The diagnosis was lesion of the pons. The patient died comatose seven weeks after admission, or four months from the commencement of the disease.—*Lancet,* June 20th, 1891.

ANALGESIA AND ATROPHY OF THE TESTICLES IN LOCOMOTOR ATAXY.

Bitot and Sabrazès (*Rev. de Mèd.*, November 10, 1891) give details of 37 well-marked cases of locomotor ataxy, in 10 of which the testicles were hypo-algesic (twice only on one side), in 18 absolutely analgesic (once only on one side), and in 9 healthy. The affection was more pronounced when ataxia was present, and even existed in the absence of any local loss in common sensation. Parallel with it there was increasing trouble in the genital functions. There was no constant relation between the analgesia and the disappearance of the testicular reflex. In 5 cases there was atrophy of the testicles (once, perhaps, antecedent to the nervous disease), the organs being soft and flabby. In 4 of these 5 cases syphilis was excluded. Among many other cases of nervous disease, the authors only found testicular hypo-algesia in 3 cases, and anæsthesia in 5; and in 5 out of these 8 cases there was inco-ordination of movement and absent knee-jerks, and 2 others were examples of progressive general paralysis. This affection may also be present in chronic arsenical intoxication, and rarely in male hysteria. In old people the glands are shrunken, but there is no hypo-algesia. In 2 of the cases with analgesia and atrophy of the testicles the nerves were examined. The myelin did not take the stain well with osmic acid; and, although presenting moniliform enlargements, it was not broken up. As to the cause of the analgesia the idea of a peripheral neuritis suggested itself: but the authors say that histological *technique* is not advanced enough to reveal slight lesions in the nerves, and that perhaps the pathogeny should be sought in the spinal cord.—*Brit. Med. Jour.*

A CASE OF CONGENITAL TUBERCULOSIS.

Sabourand publishes the following case of congenital tuberculosis in *Mèdecine Moderne* of 29th October, 1891:—The mother was a patient in St. Antoine obstetric wards. The apices of both lungs were dull, and signs of softening were

heard over the left apex. The child, a girl, was born on the 5th of August, and was of normal weight and size. The mother made a good recovery, and was dismissed on the 15 August. The placenta had not been examined microscopically. When five days old the infant had a conjunctivitis, more serous than purulent, which disappeared under treatment with nitrate of silver. On the ninth day it seemed ill, and though feeding well had a little diarrhœa. Next day it became cynanotic, and fine râles were heard over both lungs. No convulsions nor other symptom preceded death, which occurred on the morning of the eleventh day. The liver and spleen only were examined *post-mortem*. The liver was normal in size, weight, and color, without peri-hepatitis. It was riddled with tubercles varying in size from 1 to 2 millimetres, and equally distributed throughout its entire thickness. The spleen was small, hard, contracted, with the capsule thickened, and was studded throughout with tubercles of various sizes, some as large as 1 centimetre in diameter.

Microscopic examination of the liver shows that there is no trace of normal lobulation, the cells being agglomerated between the tubercles. Some tubercles are as large as a lobule, and the centre of the former seems to coincide with that of the latter, the vein being sometimes recognizable. The histology is similar to that observed after experimental inoculation: the blood-vessels are primarily affected, the nuclei being most abundant round the arteries. The bacteriological examination of the liver showed multitudes of bacilli, chiefly intra-cellular. The stain used was Ehrlich's anilin gentian violet, with safrinin as a contrast stain. With the spleen, Ziehl's solution with nitric acid showed the bacilli to be present in great numbers.

The mother died two months after the birth of the child. The pulmonary conditions progressed rapidly, and meningeal symptoms with coma set in before death. *Post-mortem* examination showed no evidence of tubercle in the breast or sexual organs. The lungs were permeated with tubercle, but there was no cavity.

The questions as to the date of infection of the child and the mode of invasion are the most important. The *post-mortem* appearances of the liver are similar to those seen in congenital tuberculosis of the lower animals, and may be accounted for by the fact that during intra-uterine life the blood is, one may say, filtered through the liver. The age of the child at death and the advanced nature of the lesions show the infection to have been intra-uterine. The splenic condition shows the disease to have been a blood infection.

MEDICINE.

LEUCOCYTOSIS IN PNEUMONIA.

Dr. R. von Jaksch, in the *Centralbl. fur Klin. Med.*, draws attention to the fact that the prognosis in cases of croupous pneumonia in which leucocytosis does not appear is very unfavorable. He thinks that in these instances it would be advisable to give by the mouth or hypodermically either pilocarpine, antipyrine, or nuclein, all of which, according to Horbaczewski, increase the number of white blood-corpuscles. Dr. von Jaksch is fully convinced that pilocarpine in croupous pneumonia actually increases the number of white corpuscles when a condition of leucocytosis already exists. For instance, in a patient suffering from pneumonia of the right base the number of white corpuscles was increased 62.7 per cent. an hour after the hypodermic injection of 0.005 milligramme of hydrochlorate of pilocarpine. This sudden increase was not due to the ingestion of food, as the patient during the same time was kept without nourishment.—*Lancet.*

ELONGATION OF THE LIGAMENTUM PATELLÆ AS A FACTOR IN THE PRODUCTION OF CERTAIN KNEE TROUBLES.

Dr. Newton M. Shaffer concludes as follows on this subject:

1. Elongation of the ligamentum patellæ may produce weak, painful, and apparently inflamed knee joints.

2. Many obscure knee-joint troubles, as well as impaired or difficult locomotion, may be explained by this condition.

3. Elongation of the ligamentum patellæ may produce a disability very like that produced by ligamentous union after transverse fracture of the patella.

And, finally, elongation of the ligamentum patellæ may be, and very frequently is, produced by forcibly breaking up a fibrous anchylosis of the knee-joint.—*Medical Record,* Jan. 16, 1892.

BONY DEPOSITS IN THE SKIN.

White (*Birmingham Medical Journal*, November, 1891.) relates a remarkable case of this condition, and compares it with Mr. Hutchinson's, reported in the *Medical Times*, 1890.

The patient was badly scalded in a railway accident in 1842, the skin of his legs being almost entirely destroyed. The healing process occupied five years, the bony plates making their appearance at a much later period. Their development has been going on in the last twenty years, in the calf, in front of the knee, and at one time completely encircling the leg. Removal has been sometimes necessary on account of irritative dermatitis set up.

Mr. White holds that failure of nutrition is not a sufficient, if any, explanation of the condition. "It results from the simultaneous action of the processes of deposition and incorporation, the least soluble salts of the nutritive fluid being left by a particularly sluggish current to become subject to the selective activity of the connective tissue cell."

SPONTANEOUS CURE OF DETACHED RETINA.

Marchetti (*Rif. Med.* January 16th, 1892) reports the following case: A man, aged 55, observed during November, 1890, that the vision of his left eye was becoming dim. This dimness increased very rapidly, and in four days there was left only perception of light. Examination revealed extensive detachments of the temporal and frontal portions of the retina, and of a great part of the nasal portion. The detachment fluctuated in the lower portion with the ocular movements; in the other parts it was distended in folds. Tension was reduced, vitreous transparent, and disc normal. Vision was restricted to P. L., and perception of movements of the fingers in the temporal section of the field of vision only. Vision had been previously good, but each cornea had a central leucoma, the remains of inflammation many years previously. He was treated with pilocarpin injections and iodide of potassium, and advised rest in the horizontal posture. In February, 1891, having continued the treatment till then, the eye was in the same condition, when quite suddenly, on the 16th, he regained his sight. This followed, apparently, on a sudden rotation of his head towards the right side, the patient feeling immediately, as it were, a blow on his useless eye. Directly after this he found that he could see objects distinctly and without any difficulty, and eight days after he could read small type quite easily. In June, when he again presented himself for opthalmoscopic examination, there was a light grey streak corresponding to the detachment, but no displacement whatever remained. The field of vision was nearly normal, save for colors, and the acuity nearly as good as before, having regard to the existence of the old leucomata. The author is inclined to attribute the sudden cure to a rupture of the detached portion, with escape of the subjacent fluid. —*Brit. Med. Jour.*

SURGERY.

ANTISEPTIC MIXTURES.

Dr. A. Cavazzni has recently reported his experiments with mixtures of various antiseptics in the form of powders. His first observations were made in thirty cases of venereal buboes. He regards iodoform as one of our best remedies in these cases, but it has the disadvantage of not possessing marked antiseptic properties. To overcome this deficiency he added salicylic acid, which is powerfully disinfectant, but somewhat irritant. The irritation was, however, avoided by the addition of subnitrate of bismuth which is, moreover, slightly antiseptic. Finally, to increase the stimulant effect of this preparation in cases of atonic ulcers some camphor was added. After numerous trials the following formula was adopted:

Iodoform	55 parts.
Acid Salicylic	20 "
Bismuth Subnitr	20 "
Camphor	5 "

The ingredients are well rubbed together and form a pale yellowish, somewhat mealy powder, which produces slight, but transient irritation, when applied to fresh wounds. This mixture is an excellent disinfectant and stimulant in cases of bubo. Its disadvantage is that it encourages hæmorrhage from the granulations, but this may be avoided by discontinuing it every fifth of sixth day and replacing it by iodol. In persons with delicate skin it may also produce excoriations.— *Wiener Mediz Presse.*

ON THE RELATIVE VALUE OF PERINEAL AND SUPRAPUBIC LITHOTOMY.

Dr. Wilhelm T. Lindenbaum (Jaroslavl, Russia), in the course of the last nine years, has made 70 perineal lithotomies in children under 15 years of age, with 2 deaths; and 32 in adults, with 8 deaths. Besides, during 1890 he performed 10 suprapubic lithotomies in patients aged from 8 to 52, with 1 death (the fatal case referred to. a man of 52, with pulmonary tuberculosis and fatty heart). The high operation was conducted after the following rule: 1. All instruments were sterilized; 2. Colpeurynter was introduced into the rectum; 3. The bladder was filled up with 250 Cub. Cm. of a salicylate solution; 4. Drainage was inserted (no vesical sutures being employed); 5. The patient was kept on his abdomen for from 8 to 10 first days; 6. The dressing was changed once daily. The urine began to flow through the urethra, on an average, on the 20th day, the wound soundly healing on the 30th. As far as young children are concerned, suturing the bladder is thought to be very difficult, and on the other hand, quite superfluous, since a healthy urine does not irritate the wound. The author's general corollaries are as follows: 1. Perineal lithotomy in early childhood represents a safe operation and gives excellent results. A relatively enormous percentage of deaths in old age can be explained by the coexistence of grave complications about viscera (especially kidneys). 2. Suprapubic lithotomy does not offer any important advantages over the perineal operation. The mortality remains yet very high, even in children. 3. Still, speaking generally, in the presence of stones, measuring above 2 Cm. in diameter, the high section should be preferred, but in cases of smaller calculi perineal lithotomy should be performed.—*Meditzinskoië Obozrenië*, No. 2, 1891, p. 133.

"MOOSE-PAPPE" AS A SURGICAL DRESSING.

Moose-pappe as an absorbent aseptic dressing, says Dr. C. G. Campbell, of Saddleworth, England, is not as well known as its merits deserve. Moose-pappe (sphagnum, or turf-moss) has great absorbent powers, taking up twenty-one times its original weight, and is decidedly the cheapest absorbent in market. When placed in contact with a liquid, moose-pappe seizes the liquid; its bulk becomes rapidly and enormously increased. The absorbed liquid does not lie on the surface or between the fibres (as is the case with absorbent cotton and wood-wool), but is shut up within the capillary cells of the moss. Thus, though it is full of liquid, it does not feel wet, and, though it may be full of pus, it appears clean. Where with an ordinary absorbent, daily dressings are required, the busy practitioner may safely leave his moose-pappe dressing two or even three days untouched, and will find, when he removes it, not a stink and a gush up of sealed up pus, but a clean wound and no smell.

As a dry dressing the moose-pappe of Dr. Rodolphi is, perhaps, the most convenient. It can be rapidly crumbled on thin gauze (which is then loosely folded over it). Moose-pappe (Hagedorn), prepared in this way, makes a beautiful, soft, dry dressing for amputations or large wounds. As a moist compress for ulcerating surfaces, moose-pappe (Hagedorn), lightly dipped in a boracic or other antiseptic fluid, makes an ideal dressing, whilst, as a padding for splints, particularly in cases of compound fracture, or fracture complicated with flesh-wounds, moose-pappe will be found most satisfactory.—*The Medical Chronicle*, February, 1892, p. 292 *et seq.*

A NEW AURAL RETRACTOR

Barth (*Arch. of Otol.*, xx, 1) describes a new retractor for spreading the divided soft parts during the operation of chiseling into the mastoid process. It consists of two bars, each provided with three sharp-pointed hooks; these bars are connected by two rods and a screw in such manner that when approximated the hooks form a single line. After having divided the soft parts, including the periosteum, and having separated the latter from the bone, the hooks of the retractor are applied so that the points touch the bone at the spot where we wish to continue to operate. Then they are separated; the points of the hook grasp the deeper soft parts, while the arms from which the hooks spring separate the more superficial soft parts and especially the divided integument, and push the auricle forward. When completely separated, the space included between the two arms presents a clear field for operation.

OBSTETRICS.

THE BLOOD IN PUERPERAL SEPSIS.

Ott reports from the clinic of Von Jaksch in Prague (*Prager medicinische Wochenschrift*, 1892, No. 14) a case of puerperal sepsis in which the examination of the blood afforded information of interest. The patient was probably infected by a midwife who attended her; two days after labor she had a severe chill, followed by fever. The midwife who cared for her had a felon upon the middle finger of her right hand where the skin had been broken. During the patient's illness her urine was examined and found to contain albumin and an abundance of aceton and urobilin. An examination of the blood showed 3,470,000 red to 15,320 white corpuscles, a ratio of 1 to 220. The percentage of hæmoglobin was $8\frac{4}{10}$. An examination of the blood stained by Gram's method showed the presence of numerous cocci in groups. Septic panophthalmitis developed on both sides. An examination of the colostrum from the breast showed the presence of cocci. The patient died about two weeks after labor, and a post-mortem revealed the lesions common in puerperal pyæmia. The cocci present in the blood, and also the condition of leucocytosis which was present, render the report of the case of unusual interest.—*Amer. Jour. Med. So.*

PRESENTATION REPEATEDLY CHANGED BEFORE AND DURING LABOR.

Gallois (*Journ. des Sages-Femmes*, April 1st, 1892) reports the following case:—The patient was an imbecile, aged 24, who had borne a dead child four years previously. She was admitted into a lying-in hospital on August 4th, when about seven months pregnant. The pelvis was narrow, not flat. The child lay transversely in the pelvis, the right shoulder tending to present. The breech was easily brought down but the fœtus quickly returned to its faulty position. An attempt was made to keep the breech down with Pinard's Belt, Gallois intending to induce labor directly the desired presentation was made sure: but the belt chafed the skin, and the feeble-minded patient would not tolerate systematic precautions of this kind. On 12th, in the morning, labor came on. A foot could be felt through the membranes, with the breech above it not engaged. In the evening the pains were rapid, the membranes intact; the patient had been left alone for a long time lest the waters should be ruptured too soon. On examination, the face was found presenting. In the small hours the waters broke, the fœtal heart sounds became weak: two hours later the brow presented. The child was delivered asphyxiated. It recovered, and so did the mother. The deformities found on the fœtal head were very marked, and intermediate between those seen in brow and those observed in face presentations. The caput succedaneum occupied the forehead but hardly reached the eyelids. The cheeks were spared, the lips tumefied: there was right facial paralysis.—*Brit. Med. Jour.*

HEMICHOREA IN PREGNANCY.

Dr. Cameron in the "*Montreal Medical Journal*," January, 1892, writes, that, as in the non-pregnant, peripheral lesions may cause choreic movements, which subside when the irritating part is exercised; so in pregnant women peripheral irritation may be propagated from the uterus to the central organs and may keep up choreic movements till the cause of irritation is removed. This is well exemplified in the following case: An anæmic, neurotic patient, subject to hysterical fits, bearing family rapidly, with a lacerated crevix and a tender retroflexed uterus, developed chorea of the right side of the body in the month of pregnancy; in a few days the left side became involved while the right side began to improve. By appropriate mechanical treatment the retroflexion was corrected, and the chorea disappeared in little more than a week.

GYNECOLOGY.

A CASE OF PRECOCIOUS MENSTRUATION.

Jakubovitch (*Vratch*, No. 9, p. 214, 1892 *Rev. Gener. de Clin. et de Therap.*, April 20, 1892) reports the case of a girl who menstruated shortly after the age of 10 years. Her period lasts for 3 or 4 days, and the act occurs several times in the course of the year. Every menstrual period is preceded by nervous disturbances, such as headache, excitement, etc. The external genital organs are well developed;

the mammary gland are of the size of an egg, and at the time of menstruation they swell up and secrete milk. Apropos of this the author, in reviewing the literature of the subject, finds the records of only 35 cases analogous to the present one. Precocious menstruation is, therefore, rare, and adds, that the prognosis is favorable, although the hæmorrhages may give rise to the production of anaemia and chlorosis. The observer advises, if the loss of blood be considerable, the administration of hydrastis canadensis and ergot.

TREATMENT OF FIBROID TUMORS OF THE UTERUS BY INJECTION OF ERGOT.

J. Schneck (*Medical Age*, April, 1892) gives the histories of three cases of uterine fibroids treated by injections of ergot into the substance of the tumors, with satisfactory results, and states that several other cases are still under observation. The preparation of ergot used is a good fluid extract, in half drachm doses, and the instrument employed is the hypodermic syringe, with a long needle; a small aspirator having been used in a few instances. It is desirable to make the injection into the centre of the tumor as nearly as possible. No evil effects have been noticed after the treatment. In a few instances a chill, followed by moderate fever, occurred, but these symptoms disappeared after a few hours. In one case reported there was an intramural fibroid encroaching upon the cervix, and about as large as an orange, in a patient 42 years old. Profuse menorrhagia had existed for five months and ergot and other astringents by the mouth had failed to control it. Injections of half drachm doses of ergot into the tumor daily for eighteen days, and every second or third day afterward for the following month caused the bleeding to cease. Menstruation is regular but there is no inter-menstrual bleeding and the patient feels well, although there is no note as to the condition of the fibroid.

Another patient, of about the same age as the first case, had profuse menorrhagia following a miscarriage, for the control of which ergot was given by the mouth, with no success. An examination revealed the presence of a large fibroid in the right lateral wall of the uterus. By use of an aspirator needle the injections of ergot were given once a week for nearly five months. The hæmorrhage was controlled during this entire period, and at the end of this time the tumor was found to be extruded into the uterine cavity, attached to a thick pedicle, and was removed by the ecraseur. The tumor was so large that the wire could not surround it, and several portions had to be cut away first. There was but slight bleeding during its removal, probably due to the action of the ergot diminishing its vascularity. The substance of the tumor was soft and friable, and probably it would have broken down and liquefied in a short time. The third case was one of fibroid tumor in the posterior wall of the womb, which had made such traction upon the fundus as to cause inversion of that organ with procidentia. The injections were practised once a week for two months, at the end of this time the tumor began to suppurate and discharge freely. After thoroughly disinfecting the parts, the uterus was replaced and kept in position by a pessary.—*Univ. Med. Mag.*

CANCER OF VAGINA CAUSED BY PESSARY.

Meyer (*Zeitschr. f. Geburtsh.*, vol. xxii, 1891, part 1) describes the case of a woman who suffered from primary cancer of the vagina, evidently caused by the irritation of a pessary which had been worn for a year without change or cleansing. The diagnosis was confirmed by excision of the affected part and vaginal extirpation of the uterus, after which the diseased tissue could be examined under the microscope.—*Brit. Med. Jour.*

PEDIATRICS.

A REPORT OF 392 CASES OF INTUBATION, AND 139 CASES OF TRACHEOTOMY DONE AT THE BOSTON CITY HOSPITAL.

Prescott and Goldthwait (*Boston Med. and Surg. Journ.*, 1891, cxxv., 694.) give the following statistics: Three hundred and ninety-two cases of intubation and 139 cases of tracheotomy have been reported, with a mortality-rate of 79-59 per cent. in the former, 88-5 per cent. in the latter; 2,815 cases of intubation and 22,941 cases of tracheotomy have been collected and analyzed, showing comparatively no difference in the mortality-rate

of the two operations. The results depend more upon the nature of the epidemic than upon the operation. With intubation the results depend more upon the skill and experience of the operator than with tracheotomy.

Thirty-seven cases were seen at least a year and half after recovery from intubation, with perfect voice, and with nothing that would indicate any ulceration from pressure of the tube.

HYSTERIA IN CHILDREN.

Jolly (*Deutche med, Zeit.*, April 4th, 1892) states that he has seen a considerable number of cases of hysteria in children which might give rise to difficulty in diagnosis. He has frequently met with persistent localized pain with convulsive phenomena, and also with inability to use an extremity, combined sometimes with distinct paralysis and anæsthesia, especially in children who have recently had acute infectious diseases. The paraplegic form preponderates, but occasionally monoplegia and hemiplegia may be observed. He has seen hemianæsthesia after influenza. Tremor was a common symptom in cases having a traumatic origin. He mentions also laryngeal disorders, and various affections of speech and hearing; in particular, stammering and more or less prolonged loss of speech, conditions which might be cured by a brief application of the faradic current. Deafness and amblyopia might also be observed. In cases in which hysterical fits of laughing or crying are followed by convulsive movements of the extremities Jolly recommends isolation, with cold douches to the face, or a somewhat painful faradic current. He relates one severe case commencing at the age of 9, in which the girl gradually grew worse, and indulged in foul and blasphemous language; at the age of 12 the evil spirit was exorcised by a thorough purging. In other cases with severe symptoms he has found the cold pack useful, or the syringing of the face with water; for the latter purpose a siphon of aërated water may be used.—*Brit. Med. Jour.*

HYGIENE.

MILK EPIDEMIC OF TYPHOID.

Dr. F. M. Williams, medical officer of health for Plymouth, has been good enough to give us particulars of the result of his inquiry into the occurence of enteric fever in connection with the milk supply for a portion of the town. Attention was first directed by the notification of three cases of enteric fever during two days in the same neighborhood, and the discovery that the households had a common milk snpply. The dairy which furnished the milk obtained it from a farm in the Plympton district, which is non-scheduled and in which the Compulsory Notification Act isnot adopted. This farm, which contains about one hundred cows, was visited, and the persons there employed stated that neither they nor their children had, during the last few months, suffered from illness or diarrhœa. The well, the cover of which is said to be leaky, was within some forty feet of the privy cess-pit, but examination by the chemical analyst gave negative results. Two other cases were shortly afterwards reported from the same milk supply, and Dr. Williams eventually ascertained that there had been a death from enteric fever on the farm some twenty days previous to his visit, the deceased being a grandchild of the caretaker. The medical man whe had attended the case confirmed the correctness of this statement, and added that there was another case of typhoid fever at that time, the patient being actually ill at the time of Dr. Williams' first visit. In conjunction with the medical officer of health for Plympton, steps were taken at once, the cows were all removed to another farm, the farm being closed as a dairy farm; the pump from the well was dismantled, the well closed, and the patient removed to hospital. Seven other cases having the same milk supply have been notified within a fortnight of the first cases not including two that have been notified since closing the farm. The total number of cases is thus twelve. One case has terminated fatally—a young man who was ordered by his medical attendant to live on a milk diet for some ailment, and who was one of the earlier cases reported.

The remainder of the cases are doing well, and it is hoped that there will be no more fatalities. It is stated that there was a severe case of enteric fever at the same farm some twelve months since, but no information as to the disposal of the excreta can be obtained, as the family had left the neighborhood. Dr. Williams is strongly of opinion, based on some years of experience of health work in rural districts, that

this is the cause of the present outbreak. As to the means of propagating the disease at the farm, he points out that the man and his wife were both engaged in the dairy work milking cows, etc., and nursing the sick child. The cesspit contained typhoid excreta, and probably polluted the well, although chemical analysis gave no proof of pollution. Two families have suffered severely, three members in one family and two in another. Several other members of this latter family suffered for a few days from diarrhœa, fever, and *malaise*. Several hotels were supplied with milk from the same farm, so that there might have been visitors who had contracted the disease at Plymouth, and not developed it until their return to their homes or elsewhere.—*Brit. Med. Jour.*

MEDICAL CHEMISTRY.

A STABLE SOLUTION OF SODIUM SALICLATE.

Solution of sodium salicylate for ready dispensing purposes very soon darkens in color, as every one knows, being due to the alkaline nature of the solution. To obviate this trouble, M. Rucker (*Zeit. O. Apoth. Ver.*) recommends the addition of a little salicylic acid, in the proportion of, say, 1 to 1000 for the sodium salt used, so as to insure a slightly acid reaction. To prepare a stable 10-per cent by weight solution direct from the acid, it requires 100 grams of salicylic acid, 61 grams of sodium bicarbonate and 1,095 grams of distilled water, the sodium salicylate formed representing approximately 122 grams. Cold water should alone be employed and too violent a reaction be avoided, while the salicylic acid must be slightly in excess. To further insure stability, filter through absorbent cotton or glass wool.

EXTRACTS OF ANIMAL TISSUES.

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NEWS AND MISCELLANY.

SYPHILIS AMONG THE ANCIENT EGYPTIANS.

Proksch (*Archives F. Dermatologie U. Syphilis*, June 20, 1891) discusses the probable existence of syphilis among the ancient Egyptians. In studying a papyrus containing instructions about the management of a disease known to them as "uxedu," he has identified syphilis. The papyrus gives the treatment for uxedu in the anus, in suppurating wounds, in the mouth, in the eyes, in the bones, in tumors of the head, in the body, in pustules, etc., thus giving an almost complete history of the various situations in which syphilis may manifest itself. The author concludes that the uxedu of the ancient Egyptians is our syphilis.

THE OWNERSHIP OF AMPUTATED LIMBS.

A singular case has recently been tried before His Honor JudgeJones in the Bolton County-court. The plaintiff, Ellis Housley, sued the junior house surgeon at the Bolton Infirmary for £10, the value of one of the arms of his son, who had been hurt at His work. The limb was amputated at the infirmary, and after the operation the patient asked for the arm, but the house surgeon refused to allow him to take it away. A day or two later the boy died, and the father again demanded his son's arm along with the body for burial. It was argued for the plaintiff that he had a right to the limb, whilst for the defendant that there was no cause of action. His Honor said the plaintiff had no property in his son or his son's body, and even a guardian was only a guardian during lifetime and not of the dead body, and there was no obligation to bury. After further argument the solicitor for the plaintiff stated that if his Honor was against him on the common law, he could go no further, and there was a verdict for the defendant, with costs.—*Lancet.*

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THE
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Clinical Lectures.

THE LIMITS OF THE ART OF HEALING.*

By PROF. H. NOTHNAGEL,
VIENNA, AUSTRIA.

Honored Assemblage:—Death, disease, and bodily sickness of many kinds—this is the inheritance of suffering mankind. The powerful desire for life, the striving towards a painless existence, and the intense longing for health stand in opposition. To the existence of these two opposing facts, the art of healing owes its origin.

Mankind has become submissive to the inevitable existence of death itself. No one to-day, thinks of exacting such a requirement of medicine as an immunity from death. To be sure, why we must die at all, why even in the most healthy subjects the mechanism of our organism must cease its activity after eighty or perhaps a hundred years of work, these are questions which science can only answer very unsatisfactorily. Processes of material changes of any kind, either in the cells or organs, causing a weakening of their functions which are necessary for the maintenance of life, these are the causes. But the true "how" and the final "why" of these destroying processes still await explanation.

Standing, as we do, powerless before death, that unchangeable law of nature, the desire to prolong the life of each individual to its greatest possible limit, is easily understood. That disease shall not prematurely end life, that those disturbances connected with or following diseases shall be annulled or mitigated, these are the requirements which are demanded of medicine.

"The great and small world studies it through and through, only in the end to let the outcome be as god wills it," was the Mephistophelic ridicule regarding the real capabilities of medicine. The term "ignoramus" can be applied to the foremost scientist of to-day, as he stands before the most recent riddles of the human life—riddles, indeed, that form so large a component of the questions of theoretical medicine. But thousands of varied forms of misery are present with us, and in the hour of danger the sick call for help, and the suffering crave for relief from pain.

How far, in its practical application, does the science of medicine fulfil the foregoing requirements?

Where are its limits, and by what are these limits determined?

What is its outlook for further growth and usefulness?

The fact, that the practical art of healing has made great advances during the last century, and more especially during the latter half of the century, needs no elucidation. The rebuilding of pharmacology, the brilliant advances in ophthalmology, the remodelling of laryngology, and the astounding growth of operative surgery and gynæcology—in the field of internal medicine, the introduction of a large number of efficient medicinial substances, and of physical curative methods, and further the recognition of the value of physiological, dietetic, and hygienic factors of the most varied kind—all these have been factors in making this a noteworthy epoch. Then, the immortal discovery of Lister, and Pasteur's discovery of the curability of the dreaded hydrophobia, and not a year since the contributions of Koch that have awakened the

*Delivered before the Society of Natural Scientists and Physicians, at Halle, Germany; translated from the author's MS., as published in the *Wiener Med. Presse.*

highest and most intense enthusiasm, all these facts give additional importance to the question: where are the limits of the art of healing? We do well indeed to always strive towards a greater and always greater enlargement of these limits, and to hope for continued growth. It is a duty to strive towards such an end. But for the investigator, it is necessary for him to only see facts, and be uninfluenced by sentiment, and then, after quiet consideration to sum up not only the attained, but also the attainable.

"To be sick, is life under altered conditions," is the definition of the great reformer in medicine, our master and leader, Virchow.

What then, is healing?—To effect pathological changes in the organism—be these of a chemical or physical nature—in such a manner, that they are brought to a standstill, the changed tissue rendered histologically normal, and the altered functions rendered physiologically normal; to restore the proper relations between the tissues; to bring about a healthy condition of all the functions of the entire organic system —this is healing.

In what measure is the art of healing capable of fulfilling these requirements? If we endeavor to answer this question with the facts at hand, we find that the short hour given us for this lecture will only allow the answer to be a very fragmentary one. Yet this even will be sufficient for us to formulate some conclusions.

As paradigm we will let serve a condition which belongs to the most frequent occurrences—interruptions of continuity by external violence, either accidental or operatively designed. These are, as every one knows, curable. But the limits of the art in this case consist in the greatest technical skill in the apposition of the divided surfaces, and the keeping away of anything that would be likely to act harmfully upon the process of healing; but upon the process of healing itself—upon the organic reunion of the divided surfaces—all these precautions have no influence. The exudation of plasmatic lymph, the processes of growth and regeneration in the cells of the injured tissues—all these occur uninfluenced by us. We are astonished, and justly astonished, at the gigantic advance of operative surgery since Lister's introduction of the principles of antisepsis, and we may well bless the name of the man who has rendered it possible to save the lives of countless sufferers, by operative treatment, and to restore them to health. Yet, we must clearly understand that this advance only consists in the fact that by means of the protection afforded by antisepsis, allowable surgical procedures can be maintained in a condition which renders healing possible. But the healing itself occurs by means of processes that are beyond our control. Naturally the extraordinary practical value of the improved operative methods, which our surgeons have discovered, cannot be here taken into consideration, and for the patient while this is of vast importance, it is not so when viewing the matter from a scientific and logical standpoint. It must be understood that *healing* in the sense that our art controls by antisepsis the organic processes, is not affected even by the gigantic practical advances made in consequence of its application. We can cure, or cause the healing, of an ulcer or abscess no more to-day than we could formerly. Excision, or opening, of such is not synonymous with true healing. As it is with the superficial interruption of continuity by force (operations), so it is with internal processes under similar conditions. In ulcerations of the stomach or intestines we can influence healing in so far as to remove the causes of danger, but we do not restore the lost tissue.

In the rupture of a blood-vessel or the injury of cerebral substance, it is, of course, necessary by means of suitable methods to check the congestion in the brain, but none of our methods will remove the clot, or reunite the divided nerve substance.

Let us choose another very common process—inflammation. The long series of clinical pictures, now acute and now chronic, which occur in the most varied organs and tissues, and are all classed under the head of "inflammations" because analogous pathological processes and tissue changes exist in all and can heal, as daily experience teaches us—the acute processes frequently, the chronic more rarely. What part does therapeutics play in this healing?

In acute inflammatory processes—as our knowledge of to-day teaches us—there is no internal medicament of direct value; only indirectly in special cases can such remedy be of value, as for example, digitalis in pericarditis and myocarditis; or symptom-

atically, as the majority of remedies in acute catarrhs. Our therapeutic possibilities consist in very ancient possessions of medical science, which for centuries were used to excess, then in part completely abandoned, and at the present used with varying frequency. Rest, cold and local blood-letting form the ground-work of a a treatment for acute inflammations, which under certain circumstances is helpful. But how frequently is such treatment worthless; how often not applicable! Think only of all the deep inflammations, the inflammations of the mucous membranes; think only of all the cases where the process occurs with great intensity independent of specific forms, such as the tuberculous or the pneumonic. In these even we are far from having satisfactory proofs that the procedures referred to, even in cases where under their application the inflammatory symptoms subside, have any direct influence upon the pathological processes of inflammation themselves. True it would seem so, but the fact has been in no way satisfactorily elucidated.

As it is with the acute, so it is also with the chronic inflammatory processes. We may be able to influence recovery in certain favorably located forms—such as chronic inflammatory exudation in a joint, inflammatory thickening of a muscle, or perineuritic swelling of a reachable nerve, by massage, gymnastics, electricity, hydrotherapy, various baths, and counter-irritation; these are our aids. But of all these it can only be said that they "excite absorption." We possess no drug that effects a cure by directly influencing the organic processes incident to such a cure. This must not be regarded as a mere "dialectic difference," for to the patient it is entirely immaterial whether the massage or counter-irritation have acted directly or indirectly, so long as he is relieved from his long-standing perineuritis. But how is it with the application of similar remedies in neuritis of the trigeminus or optic nerve? Cure, in the true sense of of the word, can only occur in a case of perineuritis when we are able to effect a restoration of the histological changes of the nerves which have taken place. The same must be said of chronic inflammations of the mucous membranes, and parenchyma of the organs. In the most favorable cases, we are in a position by means of baths and "cures," dietetic and general hygienic regimen, or well as certain pharmaceutical preparations to influence certain symptoms, as to remove the product of the disease; yet the process of the disease in itself we do not influence.

But why should I tax your patience with the presentation of an endless list of unities? Why go into a description of the processes of degeneration and atrophies as they are met with in the different tissues and organs and give rise to the most varied clinical features; why enter into a description of the many diseases of the blood, and diseases accompanied by tissue change, or discuss the vast array of the various disturbances, either anatomical or functional, of the nervous system? Why discuss the thankless efforts for the cure of foreign growths (I do not mean excision, but "cure," in the sense defined above), which at present offers as good chances for ultimate success, as does the bottom of the Kamtschatka River for raising the date palm? In every instance, so soon as we come to regard the matter in its true inwardness, we are confronted by similar evidence, and arrive at the same results which our reasoning led us to in discussing interruptions of continuity and inflammatory processes.

Only one group of diseases can hold our attention for a moment longer, since great interest is linked with it. I refer to the group of acute and chronic infectious diseases.

Typhoid fever, scarlet fever, measles, and the vast list of morbid diseases of this group, and even sepsis can be cured. Far am I from denying that the art of medicine can aid most materially in influencing a favorable result in these cases, both by combatting the dangerous symptoms, as well as by means of general hygienic methods and dietery precautions. But is our art in a position to directly influence the process of the disease and so effect a cure? Our knowledge is so humiliatingly small that out of this enormous list of diseases we can only truthfully answer yes to this question in regard to two or three; these are in malaria, syphilis, and perhaps acute rheumatic polyarthritis, or perhaps even in these cases would we not do better by tempering our answer with the reservation that it at least *seems* to be a fact? It would almost seem so to me, as

the course of malaria, even after two hundred years of the pride of practical medicine would show. Then, in acute articular rheumatism, of its true being we know nothing, and while the salicylic acid treatment indeed causes a disappearance of the fever and articular affection, yet it has no influence upon the danger of subsequent endocarditis and its dreaded sequella, valvular diseases. And so, in all other infectious diseases—so soon as they have become well developed we cannot even to-day produce a cure in the truly scientific acceptation of the term. Wherever we may turn, we are confronted with apparently impassible barriers forming the limits of our art.

Let us endeavor, from the confusing mass of unities, to deduct some general conclusions regarding the limits of healing and curability.

Healing or cure is only possible so long as a disease is still in its course; so soon as it has reached a definite end, cure is no longer possible. There remain changes, atrophies, hypertrophies and other sequellæ of varied natures. In the commonest cases these changes are unaffected by therapeutics or regeneration although they may perchance be amenable to mechanical methods or the knife of the surgeon. An acute pleuritis is curable; the results left by it in the form of pleuritic adhesions cannot be cured. Acute endocarditis may disappear, but the valvular insufficiency caused by it cannot be cured. Anomalies in change of substance which lead to the formation of renal gravel, may be checked at the outset, but the formed stone can only be removed by the surgeon. An ulcer at the cardia of the stomach can heal, but the cicatrix left and causing stenosis, can at best only be excised.

The possibilities of therapeutic influence are in many cases determined by the location of the disease. An aneurism if situated at an artery of the extremities can be rendered harmless, but will cause fatal hæmorrhage if located in the aorta or arteria basilaris cerebri. An abnormal development of fat can be checked if it is confined to the superficial parts of the body, but it will finally end in death if the heart muscles become involved.

Of almost equal importance in the question of curability is the nature of the occurrence of the disease; whether its cause develops suddenly or gradually, with great intensity or not. The same amount of arsenic that under ordinary circumstances would be unfailingly fatal, is well tolerated by the accustomed arsenic eater, cholera or epidemic cerebro-spinal meningitis may attack two similarly constituted individuals; in the one causing death after a rapid and severe course, and in the other ending in recovery after a comparatively slight illness.

A disease becomes incurable when its causes continue without interruption.

Malaria will in the end most certainly cause death if the infected person does not leave the poisonous swamp-lands that constitute his home.

Bronchial catarrh remains stationary, and will finally end in causing a disease of the parenchyma, a disease of the lungs, if the patient remains under the influence of the possibly dust-laden atmosphere.

In similar suddenness and intensity of a disease cause, and by similar extent of the local development, the individual power of resistance, or especial constitution of the subject is of great weight. The same inflammation of the lungs, which a strong man thirty-years old, can live through, will end fatally in an aged subject, a heavy drinker, or one who has been enfeebled by a dissolute life or long previous illness.

Finally, *crimen non est artis sed aegrote.* With this sentence a long series of cases must be characterized, in which every medical or scientific aid is unavailing, while theoretically of little use to us in answering our question yet in actual fact they have considerable weight. Under the most favorable conditions the most efficient methods fail in effecting a cure, either because he does not or cannot conform to them. The most active treatment will not relieve the smoker of his pharyngeal catarrh so long as he continues to smoke. In this respect we are forcibly reminded of the nervousness and neurasthenia so common in our times. Lack of fore-sight or will-power in such cases prevent frequent possible cures; often to be sure, also, the power of external influences, which keep the unfortunate subject so long under the ban of circumstances until every therapeutic endeavor comes too late to be of any value except as a passing relief, but cure can no longer be effected.

Any ailment that does not fall under one of these categories is, in principle at

least, curable. The actual cure of such is the question of the times, in our minds. As remarkable as such a statement may appear at the present condition of our capabilities, we see no reason why the true curability of malignant growths should always be an impossibility.

* * *

The following we must now acknowledge is as an undeniable fact: the actual healing or cure, the restoration to a normal condition of function and tissues, changed either chemically or physically by diseases, can only be effected by living processes in the organism. Now, the answer to our question regarding the limits of our art, is dependent upon the extent to which it is, or will be, able to influence these processes, and to determine whether or not it may extend the limits of its capabilities. And if it is shown that it can not do this or at best only in a very limited manner, then the second question comes, whether its usefulness is here at an end, or whether other possibilities are not open to it, constituting a high end for it to strive for.

With certainty can we say, that certain pathological changes stand as insurmountable barriers before even the most advanced science. Never will we be able by means of our art to restore lost cells or cause the reunion of what has been divided, never will we be able to directly influence the ganglia cells and train of associations that plays the real part in the manifestations of hallucinations.

True, by means of the exhibition of certain substance we are able to effect changes in the protoplasm of certain cells thus giving rise to certain physiological effects, although how this is accomplished is not understood. Many of the alkaloids act in this way: alcohol, ether, chloroform, bromine, curare, digitalis, and many other drugs act directly upon the substance of certain groups of ganglia-cells, as well as nerve and muscular fibres; pilocarpin, arsenic and iodine act upon certain glandular cells; phosphorous upon the process of growth in the bones.

When we come to analyze the cases known at present, however, how do we find it applicable to successful therapy? Bromides check epileptic convulsions for a limited period, but they do not affect the processes in the central nervous system.

Alcohol in measured doses stimulates for a time the action of the brain and heart, but does not act in a curative manner in any of the pathological conditions which may have rendered its exhibition necessary.

Morphine relieves the pain of neuralgia, but does not relieve the changes that cause the same. Digitalis relieves passingly the insufficiency of the cardiac muscle, tachycardia and arhythmia, but does not prevent their recurrence, neither does it restore to normal the fine or coarse anatomical foundations of these conditions.

The nearest approach to true cure or healing which we are able to produce by means of drugs, is seen in the action of iodine upon gumma and enlarged thyroid gland; but even here we must acknowledge that the true nature of the disease is entirely unknown to us. Even in the most favorable cases of unquestionable specific influencing of the diseased tissue in such a manner that the processes leading to recovery must be directly ascribed to the remedy, still, the receding of the disease in the true sense of the word is effected by the organism itself. To be sure, if circumstances analogous to those attending the action of iodine in enlargements of the thyroid were more frequent, the art of healing would be brought nearer to its ideal. Yet how pitiably few are these up to the present day! Whether or not we shall reach a goal by a similar train of thought which led our renowned Robert Koch to institute his experiments with tuberculin, clinical experience must show. Possibly the art of healing is destined to advance in this direction—at all events it forms a noble work of research, worthy of our highest endeavors. First of all, and even more with our advancement of knowledge, we must come to understand that the physician is only the servant of nature and not her master. Although, however, our outlook and possibilities may at present be very limited, yet this should offer no discouragement or cause us to give up our work without further endeavors. If Science cannot master Nature, it can at least follow faithfully, observing its mysteries. The warning sounded in the foregoing sentence gives the key to the secret of the success of truly great physicians.

We must carefully investigate and confirm the development, nature and results

of morbid changes, and also under what conditions and by what processes the human organism is capable of withstanding or recovering from these disturbances, and when possible in a suitable manner to cause or assist these processes, or to imitate them, and above all to do no harm. This is the way in which the art of healing can accomplish great and good ends. History shows most conclusively that parallel to the advance of our knowledge of scientific methods, our capabilities at the sick-bed have also advanced. Isolated exceptions prove nothing against this assertion. The exceptions are accidents, and we cannot count on accidents when we are endeavoring to extend the limits of our art.

Allow me, by the way of illustration, to quote one example. A cardiac valvular insufficiency as such we can never cure. How is it then, that in spite of the necessary change of circulation, accompanying such an insufficiency, the patient may live for years in apparent health and capable of work? The compensatory hypertrophy of a certain part of the heart is the cause of this, and the life-retaining hypertrophy itself is the physiological sequel of the above change of circulation. When this is recognized, and when we further have recognized that the extent of the hypertrophy corresponds in degree to the change of circulation which has caused it, and which it relieves, we may deduct the following, with reference to the art of healing: First, no effort should be made to check the development of this hypertrophy, as formerly used to be done; second, everything that might tend to hinder the development of this hypertrophy must be removed or kept away; third, we must not endeavor to excite the stronger action, by excitants, whatever they may be, so long as the condition of compensation remains. The organism has done its work, and our hands must not destroy or disturb it.

I will refrain from any further reference to any special instances, by which it may be seen that medicine of to-day, without being able to directly affect the process of the disease, by simply following the rule laid down above, viz., of watching and aiding the natural processes of restoration of the organism itself, can accomplish more in this way than by any other means. We have been taught above all things not to disturb the course of natural restorative processes. On the contrary medicine should endeavor to place the organism in a position which will enable it to vanquish the pathological process, either by dietetic, hygienic or climatic influences, or by a methodical stimulus to the material changes in the nervous system. The most careful and helpful assistance and watching—suited to the conditions, and our knowledge of the processes of the disease—designed always to aid the natural restorative and healing processes, this forms one of the paths in which we may tread in seeking to broaden the usefulness of our art.

With the knowledge that already developed pathological processes can only be influenced by our art to a limited extent, or perhaps not at all, medicine has recently entered upon an entirely new field of labor, from which it already reaps a blessed and costly harvest. And in fact, since in many cases we are not, and will not, be in a position to influence the results of disease in the organism, it becomes all the more our imperative duty to guard against the occurrence of the same, to recognize the cause of the disease and to render it harmless.

This duty should, however, be accepted in the fullest sense; not alone in the guardance against infectious diseases, and this again not alone in the enforcement of sanitary laws. The success of this work has caused us very commonly to ascribe a curative action to its influence, while in point of fact none such exists. By closely examining the fact, it will be seen that the results are obtained not by a process of cure in the scientific sense, but by a distinction of the cause of the disease.

When a potash solution which has been swallowed, has been immediately neutralized by the exhibition of vinegar or when the acarus scabiei has been killed by any local application, any one will understand that this is naturally only a removal of the harmfulness of the exciting cause of the disease, not a cure for the gastric lesion or cutaneous affection. But we must go much further in this line of argument; the curative action of many so-called specific remedies becomes subject to the same limitations. So the treatment of malaria with quinine must be, to all appearances, regarded as ætiological treatment. The

changes in the blood-corpuscles and in the spleen are not cured or restored by the alkaloid, but the plasmodiæ ofmalaria are in some way killed and the process of the disease in the tissues stopped.

As the acid renders the alkali harmless, thus removing the cause of disease, so does quinine render the plasmodium in the blood harmless.

The hope is by no means unjustifiable that in the near or perhaps more distant future, such a destruction of the exciting causes of the disease may be possible by means of the employment of specific remedies in other infections. After the destruction of the course of the disease, the nature process of healing can effect a cure of the existing disturbances: in typhoid fever, the intestinal ulcers; and the bronchitis in whooping cough. It is possible that advance in this direction may occur by accidental discovery, as was the case with quinine in malaria and salicylic acid in rheumatism. All the same, the opinion is not without good foundation that methodical investigations in this line may also be fruitful of success. And although the battle of opinions still wages here or there, and although many of the results as yet obtained, are only applicable to the diseases as found in animals, yet there is no real reason why the same results should not be reached in the disease as it appears in the human organism.

The most noteworthy endeavors of the present, move in three directions: the healing of bacteriological diseases that already have advanced as far as clinical manifestations; to render harmless infections still in the incubatious period; to guard against infections, or rather to prevent their occurrence.

The last named effort has been the one most advanced. It can accomplish its results by two different means. The one consists in the application of sanitary precautions against infection. It is very clear that the value of these precautions, their establishment and maintenance, becomes greater with the advance of our scientific knowledge. Cholera may be remembered as a good example. The other possibility is to prevent infection by rendering the individual organism immune. An unparalleled example of this may be seen in the precautionary inoculation, or vaccination, against small-pox. The result was reached by the simple clinical observations of the English physician whose name millions have already lauded in gratitude. To cause immunity by artificial precautionary inoculations, forms a scientific fundamental principle occupying a formost position in the advancing tide of research. Whatever favorable results it may ultimately obtain, the following is practical and clear: Even if we come to the possession of advanced methods in this line, we will only attempt preventive immunization in the case of such diseases of an infective nature, that affect the majority or at least many individuals and to the danger of which they seem most liable. So besides small-pox and possibly scarlet fever, would come under this category besides these, also whooping cough, pneumonia, diphtheria, typhoid fever and the epidemics most prevalent at the present time, including cholera, influenza, typhus, etc. Naturally geographical conditions would alter or modify this list. On the contrary, for many patent reasons, it is highly improbable that general preventative innoculations will ever be undertaken in such diseases as hydrophobia, anthrax, and tetanus. Such an advance would to-day seem rather visionary, but the possibility exists and we are already close to its fulfillment.

The second endeavor, namely, that of rendering harmless an already existing infection (which, however, is still in the period of incubation) has an existing paradigm in Pasteur's inoculation in hydrophobia. The number of this class of cases will of necessity always remain limited. The cause for this limitation is very apparent. In hardly any case can this period of the disease (the incubation period) be recognized at all, or can it be recognized whether the pathogenic germs have entered into the human organism or not. How may we determine, in the case of a perfectly healthy man, whether there are tetanus bacilli or the cocci of erysipelas in his system? We must have a tangible source before we can proceed, such as the bite of a rabid animal.

From a practical point of view, however, our endeavors will be in the direction of that goal, in which we will be able to find remedies that will render harmless the exciting cause of disease, even after the same has been clinically manifested. In what manner these remedies act, whether they act harmfully upon the mi-

croörganisms themselves, whether they render their nutritive soil in the organism unfavorable to their further growth, or finally, whether they increase the withstanding power of the cells (phagocytosis, or otherwise)—all these are secondary to the practical results achieved. The goal is an exalted one, but this is no cause for impossibility of attaining it, and its attainment would be a brilliant triumph for the art of healing. To be sure, even after its achievement, it would be a mistake to imagine that death from any disease in question could always be avoided. Even in such a case the severity of the disease remains a potent factor in the possibility of recovery, as has already been referred to in another part of this address. A sudden overloading of the organism with large numbers of the exciting factors of the disease, an existing lack of withstanding power of the organism, the institution of the treatment at the time when the extent of the tissue changes render it too late to be of any value, since the natural process of restoration cannot occur—all these will act as limitations to its usefulness.

Naturally the duty of the preventing and removing the cause of disease to the utmost limits, holds good in the most varied conditions, only the results of such a course are rarely so evident as in the treatment of bacteriological diseases. Very frequently the cause of the disease is entirely removed from any possible therapeutic influence. This is the case in that frequently referred to affection, "cold," the importance of which is frequently absurdly over-estimated, but which in some cases cannot be denied. In many cases the cause is even now entirely unknown, as in renal atrophy (Schrumpfniere) and leucæmia, as well as many other diseases. Or again, the cause may be in the patient's manner of life, social circumstances. To offer single examples of all these, would lead us too far.

Even the most important point I can here only touch upon most briefly, in the technical knowledge of which the power of the law and society itself must join hands in order to grasp strongly at the very foundation of the subject: I refer to the general maintenance and care of health.

And although our art is unable to effect healing by the impossibility of effecting the natural processes at our will; and even when it finds narrow limits in the prevention of diseases, even granting that such might be the case, even then its field of usefulness is by no means exhausted. There still remains an open field of extreme value, namely, the treatment of disease symptoms. Out of the countless number of pharmaceutical preparations the majority are valuable in this respect, and apart from these the value of mineral springs, bath-cures, electricity and numerous other therapeutic aids. We must not under-rate the vast importauce of this part of the art of healing.

For the sufferer it is frequently quite immaterial whether this or that functional change has taken place in his body, as long as he does not experience any trouble from the same, his capabilities for work not being lessened or his life shortened. Not this alone, but also something vastly more important. It is the symptomatic treatment alone that often creates the possibility for the natural process of healing or cure; it annuls those symptoms which are most dangerous to the life of the patient. Truly no one who has been a recipient of the successful treatment of a physician in œdema of the lungs or cardiac failure when the stamp of death has already been upon him, will think lightly of the value of symptomatic treatment. In this the art of healing is not only capable of great advancement but it is now rapidly making these advances in a most satisfactory manner.

While Griesinger only thirty years ago complained bitterly against the helplessness of the physician to reduce high fevers, we now, thanks to the cold-water treatment, and thanks to the discovery of a list of most energetic antipyretics, are able to keep the temperature of a patient suffering with typhoid fever, almost normal. Yet we no longer deceive ourselves as to the value of these proceedings. Antipyresis is only the relief of a symptom and then only questionably; the true process of the disease is not affected by it. Think of the number of hypnotics that have been given to us in the past four years—a welcome addition to the old king of hypnotics, opium. Then again the number of antiseptics; and pilocarpin, cocaine, diuretin, and many others. Equally fruitful has been the introduction of symptomatic curative methods. In this respect we need

only refer to the pneumatic apparatus and irrigation of the stomach.

"In all we see life and active work,
Budding branches and ripe fruit!"

And in all this how humbly must we acknowledge our ignorance. Every human life that ends prematurely, every one whose life of usefulness is endangered by processes we cannot overcome; these show the limits of our lot. And what is more poignant, the knowledge that certain difficulties we may never overcome, certain limits never overstep, and never master the processes of life itself.

We would only desire to extend vastly the limits of our field of usefulness, and no matter how slowly we progress or how many set-backs we meet with, yet spurred onward with ardent enthusiasm, we look always toward that guiding star, in the light of which we seem to read that—

"To work in the service of mankind,
Is the noblest duty of man."

PROLAPSE OF THE EXTREMITIES IN HEAD PRESENTATIONS.

J. Kaeser (*Centralbl. f. Gynäk.*, No. 2 1892), from a study of recorded cases, finds that prolapse of the extremities is far commoner in multiparæ than in primiparæ. The complication is favoured by hydramnion, contracted pelvis with previous heavy labors and twin gestation, since in these conditions the inferior uterine segment does not press on the head with firmness sufficient to prevent prolapse of the extremities. Prolapse of the arms is less serious than prolapse of the legs, but the cord often comes down as well in these cases, and, that condition is very grave for the child. When the membranes are yet entire the obstetrician must wait till the os is completely dilated. Then the protruding extremity must be pushed up and the head brought well down by external pressure. After rupture of the membranes, manual reposition of the prolapsed member must be effected; if this proves unavailing and the head is movable, it will in many cases be advisable to turn. When the head is firm, reduction of the extremity should be cautiously attempted in the intervals between the pains. If this should fail, then according to the nature of the case in other respects, natural evolution may be awaited, or the forceps or perforator may be required.—*Brit. Med. Jour.*

Communications.

REFLEX URETHRAL AND GENITAL NEUROSES; URETHRAL NEURALGIA AND HYPERÆSTHESIA; HYPERÆSTHESIA AND NEURALGIA OF THE TESTES.

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There are a few morbid conditions of a functional character which, although oftentimes an integral part of organic diseases of the organs which it is my special province to consider, are occasionally either morbid entities or else the prominent source of complaint on the part of the patient, indeed we are apt to be more often consulted regarding these functional or nervous derangements than the diseases upon which they frequently depend.

There is, perhaps, no subject in the whole range of genito-urinary disturbances of greater importance than the varied phenomena involving nervous derangements that are due, directly or indirectly, to pathological conditions of the various portions of the urethral canal. It is certain, also, that in no class of cases which come under the observation of the genito-urinary surgeon, is an accurate diagnosis of greater importance, or more difficult to accomplish. I feel, therefore, that a contribution to the special study and treatment of such cases is, to say the least, warrantable.

When we consider the vast amount of labor and talent that have been devoted to the study of the reflex neuroses of the female due wholly or in part to pathological entities affecting the uterus and its appendages, it is certainly surprising that more attention has not been given to analogous conditions in the male due to disturbances of the generative organs and especially of the urethra.

Taking as our point of departure the prostate body, we will find quite a close similarity between some of its morbid conditions and those affecting the uterus. Physiologically, the prostate, or at least a portion of it, is the homologue of the uterus, there being the closest resemblance in the muscular structure of the two bod-

ies. If the muscular tissue becomes perverted in growth, we have in the one, uterine myoma, and in the other, prostatic hypertrophy, the structure of the two morbid processes being strikingly similar. When, as is occasionally the case, the "third lobe" of the prostate becomes so circumscribed as to form a distinct tumor, it is generally not unlike a pedunculated fibroid. It will also be found that certain remedies which have a pronounced action upon unstriated muscular fibre, have a somewhat similar action upon the prostate and uterus, this being especially true of secale, ustilago maidis, and hammamelis. Certain sedative remedies act very similarly upon irritative affections of the uterus or ovaries, and the prostate. To carry the argument a little further and directly approach the subject of neuroses, it will be found that certain irritations affecting the prostate, will produce effects quite like those produced by utero-ovarian irritation in women. False spermatorrhœa (spermatophobia) pseudo-impotency involving disgust for the sexual act, melancholia, hypochondria, neuralgias whether of the contiguous or remote nervous filaments, and nervous inhibition amounting to almost complete paresis, are all possible results of urethral or prostatic irritation, and these conditions are all represented by similar disturbances, such as hysteria and allied conditions in the female, due to morbid conditions of the generative organs. The analogy between the results of prostatic catarrh and those of cervical catarrh, as shown in one of the cases herewith reported, is sometimes especially striking.

One of the interesting features of stricture of the urethra, is the ensemble of symptoms of a nervous character that is so often seen, and which neuroses are frequently entirely disproportionate to the degree of organic trouble present. Cephalalgia, neuralgia in various localities, particularly sciatica, lumbar and intercostal neuralgia, are quite common, but are probably regarded by both physician and patient, as coincidences rather than as bearing any consequential relation to the stricture. Associated with these are others (quite as prominent in some cases) of a purely mental character, such as melancholia, hypochondria, disturbed sleep, incapacity for intellectual effort, and deterioration of business capacity, perhaps associated with great irritability of temper. Disturbed digestion and general faulty nutrition are constant. That these various morbid conditions depend upon the stricture is never fully appreciated until that organic entity is cured, when the complete restoration to health demonstrates their true relation to the primary source of irritation. Many of my patients tell me that they had become so accustomed to their little ailments that they had come to consider them a matter of course and had never dreamed of their association with the stricture until the latter was cured. One of my patients remarked that he did not know how sick he was until he had been cured of his stricture.

Certain cases of gleet are associated with considerable mental depression which is commonly attributed to the moral effect of the supposed drain upon the system. This mental disturbance I believe to be in many instances the result of reflex irritation through the sympathetic system, which is so closely associated with the functions and nutrition of the sexual organs.

Morbid conditions of the urethra not only cause neurosis in other portions of the body, but they are often a reflex result of disease of contiguous structures; thus I have noted cases of spasmodic stricture dependent upon hernia and varicocele. Dr. Otis has described some very interesting cases of chronic spasmodic stricture of reflex origin. Operations about the anus are very often followed by spasmodic stricture and urinary retention. Morbid conditions of the anterior portions of the urethra often cause reflex disturbances of the deeper portion of the canal, or indeed, of the bladder. This is very familiar in connection with the results of contraction of the meatus.

One of the most annoying complaints which the surgeon is called upon to treat in connection with the genito-urinary apparatus, and especially in stricture, is neuralgia and hyperæsthesia of the urethra. This disorder is most often the result of long standing urethral inflammation, or stricture with its attendant gleet, and frequently persists long after organic disease has apparently been cured. The majority of patients who suffer from urethral neurosis of this kind are either of an emotional highly sensitive nervous organiza-

tion—often simulating "hysteria" in the male—or of a gouty temperament with highly acid and concentrated urine; anæmic and cachectic patients are especially liable to it if nervous or rheumatic. In such patients the imagination has been over wrought by the dread of serious results from urethral disease, and the mind depressed by a sense of self-degradation. The condition of the mind as well as that of the urethra has been impaired by long continued treatment of something which although trifling in itself perhaps, is to the patient, a terrible morbid entity, and a mental incubus from which he is never free except during the hours of sleep. Quack literature, irritating injections, over enthusiastic treatment, sexual starvation and excitement without gratification, are all disturbing elements in his case, and if we superadd the results of dissipation, intemperance and dietetic errors, what wonder is there that he never gets well, or that he magnifies the slightest unusual sensation about his sexual organs into something new, serious and startling. Such patients will say to us when we try to convince them that their gonorrhœa, gleet or stricture is practically well; "But doctor, I am not quite right. I have a funny feeling at this point in the canal," or the complaint will be varied by a description of severe burning or cutting pains in the canal during micturition, or a tender spot usually near the meatus. Sometimes the pain radiates to the other portions of the sexual organs. On examination with the urethroscope, nothing appears which would account for the trouble; and treatment is usually of little avail, unless we succeed in obtaining the patient's confidence and inducing him to believe that his trouble is not organic and will soon wear away—only too often however, he goes from surgeon to surgeon in the vain endeavor to find relief, until despairing and disgusted he resigns himself to what he considers inevitable fate and lapses into confirmed melancholy and hypochondria. Great irritability of mind alternating with depression and melancholia. Morbid states of the prostatic sinus and vesical neck with or without co-existing stricture occasionally give rise to urethral neuralgia; vesical calculus and tumors are especially liable to be complicated by it. Hyperæsthesia of the urethra is so often associated with stricture and gleet, that it is worthy of consideration in every case in which obstructive spasm occurs during instrumentation; some canals will be found to be so hyperæsthetic that a chronic spasmodic condition exists. In some cases of chronic spasmodic stricture or urethrismus, local lesions of the mucous membrane exist, while in others nothing abnormal is to be detected.

Hyperæsthesia of the testicle, is an interesting condition which sometimes results from reflex irritation from stricture; more often however it is due to excessive sexual indulgence or the opposite extreme, i. e., ungratified and prolonged sexual desire. It is most apt to be associated with cachexiæ, gout, neurasthenia or anæmia. The testicle may be relaxed and soft, or full and firm to the feel. Oftentimes varicocele is present and acts as an efficient cause for the affection. Hypochondria, melancholia and various mental perversions of a delusional character are not unusual, and may perhaps be associated with a sluggish portal circulation or dyspepsia. Sudden deprivation of customary sexual indulgence is said by Curling to be a frequent cause.

The symptoms consist in extreme sensibility and tenderness either of the entire testicle or some spot upon its surface. So exquisitely tender is it that oftentimes the contact of the clothing and the various bodily movements cannot be borne.

Neuralgia of the testicle, is really an exaggeration of hyperæsthesia, and has in addition to hyper-sensitiveness, paroxysms of shooting cutting pain in the organ. The causes are much the same as for hyperæsthesia-syphilis, gout, and malaria having a prominent place in its ætiology. Urethral stricture quite often and prostatic and bladder disorders occasionally cause it. The pain is much like that of renal colic and is sometimes attended by retraction of the testis from spasm of the cremaster and the sick, faint feeling and cold perspiration characteristic of shock. I believe that some cases are really due to irritation of the renal pelvis and ureter by sharp crystals in the urine, and this acting reflexly produces pain in the testis. Usually only one testis is involved. As a rule the patient can walk about but in the severe cases he is apt to be greatly prostrated, and in addition he usually suffers from pain and soreness on movement.

The treatment of the neuroses which

have been presented consists in following some very plain indication as well as putting in practice numerous general principles. First and most important of all is attention to the patient's mental condition. His mind should be diverted from his physical ills, and at the same time kept free from all sources of sexual disquiet. Questionable literature and the society of loose woman must be avoided; in short, an attempt should be made to correct the impression so prevalent among men, that man's chief mission upon earth is the procurement of material wherewith to cloy his sexual appetite. *Once dispel the idea that his penis and testes constitute the axis around which his earthly existence revolves; and one will have done more for his patient than if he had fed him the entire contents of a drug store.* Having allayed sexual disturbances of a purely mental or moral character, it remains for us to secure for our patient physical sexual rest, it being sometimes a matter of nice judgment to determine whether moderation or strict continence is best for the patient's welfare. In a general way it may be said that those neuroses which are dependent upon or complicated by actual inflammation, acute or chronic, demand absolute continence, while in those of a purely nervous character, moderation is to be advised. It is always a hard matter to determine the degree of success of our prescription in this matter, as the patient's penis is not only quite liable to gain the mastery over his reason and judgment, but over his morals as well, and he will therefore be apt to consider that a lie to his doctor, like Rip Van Winkle's drink, doesn't count.

Second only to sexual rest is the correction of urinary activity. This may be corrected by diet and remedies combined, the diet being by far the most important. The proper standard for a suitable diet is bread and milk, but this may be varied within narrow limits. Nitrogenized food, stimulants and tobacco must be strictly prohibited. As an adjuvant to this regimen, the Turkish bath does excellent service.

The best remedies to correct hyper-acidity of the urine, are the acetate and citrate of potassium, liquor potass, and in gouty or rheumatic patients (who are especially liable to neurotic symptoms from urinary disturbances) lithia, colchicum, and salicylic acid. Mineral waters are very useful, the Buffalo lithia and Waukesha waters being especially useful. Several of my patients claim great benefit from partaking freely of the Garfield Park mineral waters.

Sedatives and anti-spasmodics are often useful in these cases, the following being of service in different cases, viz: potassium bromide, gelsemium, hyoscyamus, camphor monobromate, morphia, salixnigra and ergot. Tonics are often required, the best being the chloride of iron, strychnine, arsenic and quinine. In those rare cases of spasmodic stricture of malarial origin, quinine is of course a specific. Three very useful drugs are the phosphide and bromide of zinc, and the bromide of arsenic, these being great favorites of my own.

In many cases of urethral neurosis, surgical interference is required, thus a contracted meatus must be cut, a stricture dilated or cut, hernia or a varicocele operated upon or properly supported, etc. *The paramount indication from a surgical standpoint, is the relief of obstructive and inflammatory lesions of the genito-urinary tract.*

Cases of irritability and hyperæsthesia of the testes are by no means promising. The use of anodynes is ordinarily reprehensible as the disease is chronic in character and a narcotic habit may be readily acquired. If hygiene, the steel sound, the suspensory bandage and marriage do not cure, the case is apt to be hopeless. Galvanism and the application of ice bags are said to be of service. Castration is not to be thought of, but the idea suggests itself to me that in an obstinate case, stretching the spermatic cord with incisions into the tunica albuginea might be successful in curing the neuralgia. Hammond suggests pressure upon the cord for the relief of the obstinate cases, upon the theory that in this way the sensibility and conductivity of the affected nerve fibres will be obtunded.

A very interesting case showing the great annoyance which may reflexly arise from slight irritation of the genito-urinary tract came under my observation a few days ago. A gentleman 28 years of age had been troubled by frequent micturition especially a night for some years. At times he would be compelled to rise four or five times at night to evacuate his bladder. The only point in his history of any

importance was a gonorrhœa some seven or eight years ago. He confessed to masturbation and sexual excess in times past, but stated that sexual apathy and incapacity had prevailed of recent years. On examination I found a meatus which had been badly cut by some surgeon one year ago. Just within it was a very irritable and resilient stricture of a calibre of twenty Fr. Not a stricture perhaps, in the eyes of some surgeon, but a decided stricture in my opinion. This contraction was so irritable that attempts at exploration threw the entire canal into a state of spasmodic contraction. I found it impossible to pass a bougie through the deep portion of the canal. Cocaine was applied and a meatotomy at once performed. As soon as the meatus was free, I passed a 32 Fr. solid steel sound into the bladder without the slightest effort. The night of the operation the patient had the first uninterrupted sleep that he had enjoyed for years, this experience being repeated every night following until he left for his home in the west.

We have here a case of vesical and prostatic hyperæsthesia, and chronic spasmodic stricture—urethrismus—instantly relieved by removing the reflex sources of irritation, a resilient irritable meatal contraction.

Another interesting case of a somewhat different type is at present under my care. This case shows how posterior irritation may reflexly excite disagreeable symptoms in the anterior portion of the genito-urinary tract. A young man of twenty-five who had suffered from several severe attacks of gonorrhœa, presented himself to me complaining of severe burning and and hot, lancinating pains along the pendulous urethra, localized at times at a point one inch posterior to the meatus. These painful symptoms were chiefly manifest after urination although present in the intervals. The patient was extremely neurotic and suffered from sexual hypochondriasis. Otherwise he was in a normal condition. The urine presented no pathological features, save *tripper fäden* and mucous casts of the prostatic follicles of the characteristic horse-shoe nail variety.

Examination with the bulbs showed a urethral calibre of thirty-four French, and an absolute freedom from contractions. There were several points of tenderness in the penile urethra, and excessive tenderness in the prostatic region. Rectal examination showed the prostate to be slightly enlarged.

I made the diagnosis of urethral neuralgia and hyperæsthesia dependent upon posterior urethritis and follicular prostatitis.

There was no cutting to be done, and the treatment therefore consisted of intermittent dilatation with large sounds, and the application of nitrate of silver solution to the prostate. These applications were alternated with the application of the continuous current, positive pole, to the deep urethra. Internally tonics were given, the Tr. ferri chlor. being mainly relied upon. The case has slowly but markedly improved, a fact which is particularly gratifying in view of the stubborness of of such cases.

I wish to state in passing that I envy those surgeons who have such brilliant success in the management of this type of genito-urinary neurosis as is claimed by some. Personally I had rather see the gentleman with the cloven hoof walk into my office, than one of these patients.

The explanation of the obstinacy of such conditions is to be found chiefly in faulty sexual hygiene, a matter over which we have but little control.

As illustrative of the interesting character of some of the cases described, I take the liberty of presenting the following, selected from my case book:

Case I. Reflex vesical irritability and intercostal neuralgia from contracted meatus. W. R. age 39. This gentleman had had numerous attacks of gonorrhœa in his youth, the last attack having occurred about fifteen years ago. Since this last attack he had been troubled with frequent micturition, necessitating his rising six to eight times during the night, and causing great irritability of mind. Micturition was occasionally quite difficult, requiring fifteen or twenty minutes for its completion, the stream being especially slow in starting. Every spring and fall and whenever he was overworked he suffered from a severe attack of pleurodynia, which had been variously diagnosed as pleurisy, impending pneumonia, cardiac neuralgia, intercostal neuralgia, etc. In two of these attacks in which I attended him, there was an elevation of temperature of about four degrees, with considerable

prostration, leading me to believe that the attacks were of a rheumatic character. On examination of the urethra, I found the meatus so small as to barely admit a small probe, and excessively tender and inflamed. A slight gleety discharge was noticeable, which the patient stated had been a constant symptom for years. I at once enlarged the meatus to 34 French, and attempted a thorough exploration of the canal. I found that steel sounds would not pass the muscular urethra on account of the intense spasm which they induced, soft bougies, however, passed readily up to 18 French. Above that size could not be passed without producing intense pain. No organic contraction of the canal could be demonstrated by either the urethrameter or *bougies a boule*. The second night after the meatotomy, the patient slept soundly for the first time in some years, and he has continued to secure his natural rest ever since, it being now three month since the operation. The flow of urine has become quite free, and starts as soon as an attempt at micturition is made, the act of micturition being of normal frequency. A marked improvement in the general health is noticeable and the nervous irritability has in a great measure disappeared. There has been some increase of weight, but as the patient is naturally spare, this has not been very marked. The attacks of pleurodynia have not recurred, although the usual time for their occurrence has passed; and as time goes on, I am confident that the theory of their dependence upon the urethral irritation will be confirmed. The gleet has disappeared entirely, and there has been a decided increase of sexual vigor; in short, as the patient expresses it, he is "himself again."

Case II. General sympathetic disturbance and neuralgia of the testes, from stricture of large calibre and follicular prostatitis.

J. G. R. aged 45. This gentleman had several attacks of gonorrhœa, the last one having occurred some twenty years ago. For the last four years he had been suffering with irritation of the urethra, which had been referred to stricture, and treated by dilatation. Later on he had been "quacked" for diabetis, prostatic enlargement, Bright's disease, rheumatism, and several other afflictions, with no effect save to convert the patient into a confirmed hypochondriac. At the time he consulted me, he had been suffering from paroxysmal pain in the testes, with occasional "burning" sensations in the testes, perineum, and cranial vertex, and pains of a rheumatic character in the limbs. On examination of the urethra I found that it would admit an 18 English sound quite readily save some pain was experienced at a point one inch from the meatus. At this spot the *bougie a boule*, demonstrated the existence of a linear stricture of large calibre. The prostate was found to be somewhat tender, but not enlarged. On examining the urine I found that it contained membranous shreds, which from their appearance I judged to be from the prostatic urethra, and the result of follicular prostatitis. A slight gleety discharge was noticed, evidently of a similar origin.

The meatus and stricture were cut to a 40 French, with a complete relief to the neuralgia of the testes. The rheumatism in the limbs has greatly improved, but the feeling of heat in the testes, perineum, and head has in a measure persisted, although much better. These latter symptoms I attribute to prostatic irritation, more particularly because applications to the prostatic sinus, of a sedative or astringent character, produce a marked and speedy amelioration of them. I have found also that the shreddy appearance of the urine was increased by each application to the prostate. Hot boracic acid irrigation has been substituted for these applications, and the case is slowly improving. The connection between the neuralgia of the testes and the stricture in this case is demonstrated by the improvement resulting from urethrotomy.

Case III. Pseudo-impotence from contracted and irritable meatus. This case and Case IV I will not give in detail, but will present the salient points:

A young man of 27 had suffered from several attacks of gonorrhœa, the last of which ran into a gleet which lasted about a year. There had been no trouble with urination, but about six months before I saw the patient, he noticed a loss of sexual power. He would suddenly succeed in securing an erection at times, but erection would suddenly cease in the act of copulation. On examination I found the penis and testes apparently normal, but the meatus was quite narrow and excessively sensitive. There was no deep or penile stricture.

The meatus was incised to 34 French,

and sounds passed to the bladder every third day for several weeks. At the end of a month improvement was reported, and in about two months the patient reported himself as entirely recovered from his sexual disability.

Case IV. Vesical atony from contracted and irritable meatus.—This patient, 40 years of age and a gambler by profession, gave the usual history of numerous gonorrhœas and also of syphilis. Micturition had for a long time been attended by pain and smarting at the meatus, and a slight gleet had been present for some years. For about a year the stream had grown less and less forcible, until quite a strenuous effort was necessary to empty the bladder. On examination the meatus was found to be only moderately contracted, but very tender, the lips being everted and reddened. No deep strictures were discoverable. The feeble flow of urine through the catheter demonstrated the vesical atony. As the obstruction was only moderate and was congenital, the atony was explicable only upon the theory of reflex spasm of the cut off muscle and inhibition of the detrusor urinæ. Meatotomy to 40 French resulted in an almost complete cure as demonstrated by examination six months after operation.

Other cases of a neurotic character have occurred in my genito-urinary practice, but these cases will serve for the purpose of illustration. In all my cases, due attention has been paid to general hygienic and medicinal measures, but the details of treatment would simply result in prolixity, without adding to the value of the report.

I have found that reflex neuralgia of the testis, penis and cord, and chronic spasmodic stricture are by no means rare, as several instances among my patients serve to demonstrate.

FATAL POISONING BY CHLORATE OF POTASH.

Dr. M. J. Donahoe reports in the *University Medical Magazine* for January a case of a man thirty-six years old who took by mistake two tablespoonfuls of chlorate of potash in water. Four of five hours afterwards violent vomiting set in, accompanied by great pain and tenderness in the epigastrium followed by albuminuria, and cardiac weakness, gradually increasing for a week, when the patient died.

CLINICAL CONTRIBUTION TO THE STUDY OF HYPERTROPHIC HEPATIC CIRRHOSIS.*

By DR. FREGHAN,

BERLIN, GERMANY.

Laënnec regarded hypertrophic cirrhosis as the early stage of ordinary atrophic cirrhosis of the liver. Todd, in 1857, was the first to try to show that an essential difference existed between the two forms. In 1859, Charcot and Luys contributed a short report to the Société de Biologie, supporting the same view on purely pathological grounds. Dr. Freghan very frankly admits that race prejudice prevented the Germans from giving a proper consideration to these investigations. Other investigators, however, followed up the studies of Todd, Charcot and Luys and with substantial aggreement.

Dr. Freghan reports four cases of hypertrophic cirrhosis, all of which showed very similar symptoms and presented nearly identical post-mortem appearances.

Case I. was that of a saloon-keeper aged 51, with good family and previous personal history. His habits had been correct with the exception of moderate indulgence in alcoholics. The disease had developed gradually in the last three months, the patient complaining principally of increasing weakness, loss of appetite and indigestion. Vomiting and profuse diarrhœa were recent symptoms, the bowels having previously been regular. For six weeks there had been jaundice with light colored stools, enlargement of the abdomen and swelling of the legs, particularly toward evening.

Condition on entrance:—The patient is a large pretty perfectly built man, moderately well nourished; icterus marked and general, including the conjunctivæ and upper air-passages. Considerable œdema of the lower extremities, tongue slightly coated; appetite not bad; temperature 97.6° pulse 108, respiration 24; urine scanty, dark-brown, with a yellow foam on shaking; much bilirubin present and a trace of albumin. The urine after standing deposited a sediment of isolated epithelial cells, pus cells and hyaline casts

*Condensed translation by A. L. Benedict, A. M., M. D., from the *Archiv f. Path. Anat. u. Phys. u. Klin Med*, April, 1892.

tinted yellow. Bowels sluggish, fæces hard and grey and of the consistence of clay. Lungs normal except for moist râles posteriorly; heart normal. "The abdomen is half-cannon.belly forward arched." No trace of collateral venous anastomosis; no tenderness on pressure; vague fluctuation inferiorly. Percussion verifies the expectation of ascites which is moderate and freely movable; liver greatly enlarged and plainly palpable; left lobe is the most hypertrophied and can be traced far into the left hypochondrium, no irregularities can be felt. The margin is rounded and the consistence of the whole organ strikingly hard. Liver reaches from the fifth rib to a hand's breadth below the arch of the ribs. The spleen is not palpable but on percussion is found to be enlarged, reaching from the eighth to the twelfth rib.

Course of the disease. The temperature remained about normal,the pulse continued rapid. The general symptoms became worse and worse and the patient's strength fell gradually but without remission. The icterus remained stationary. After eight days in the hospital the constipation was succeeded by watery but normally colored stools. The ascites increased very slowly but the patient complained so incessantly of the weight and distension that on September 11, eight weeks after admission to the hospital, the abdomen was tapped and 3000 c. c. of deep yellow fluid removed. Microscopical examination of the fluid revealed nothing. The tapping afforded only temporary relief. Four days later, the patient's intellect became disturbed and his speech was irrational and the articulation indistinct. For several days preceding, he had suffered from headache. A condition of sopor slowly deepened into coma with involuntary evacuations of urine and fæces and heavy labored breathing, and on September 21, death resulted.

Autopsy.—Diagnosis: Hypertrophic hepatic cirrhosis, enlarged spleen, ascites, laryngitis, pharyngitis, catarrhal bronchitis, œdema of the lungs, hypertrophy of the heart, arterio-sclerosis, parenchymatous nephritis.

Skin brownish yellow, face pale, considerable œdema of the lower extremities. Mucous membrane of the air passages and pharynx icteric and covered with a mucopurulent secretion. Small quantities of clear yellow fluid in both pleural cavities. Left lung slightly adherent to the chest wall at the apex. On pressure, foamy fluid exudes from the bronchial tubes. Very little serum in the pericardium. Heart broadened. Tar-like fluid blood in the left ventricle and also strongly icteric chicken-fat clots. Valvular apparatus intact. Atheromatous changes above the aortic valves. Heart muscles yellowish brown, friable. The abdominal cavity contained about 4000 c. c. of turbid, somewhat fibrinous, dark yellow fluid. Intestines inflated and floating on the surface of the fluid. Serous coat of intestines slightly roughened and thickened in places. The stomach contained dirty brown fluid, its mucous membrane was markedly reddened in places and particularly near the pylorus. Gall duct patulous and discharging normal bile on pressure. Intestinal contents yellow in the jejunum, more brownish in the ileum. Mucous membrane of small intestines slightly reddened and loosened, the injection increasing toward the large intestine. Spleen enlarged by half, capsule greatly thickened. Section shows a bluish red color interspersed with dark blue pigment. Kidneys large and thick. Capsule strips quite easily. Surface smooth but with a few slight depressions. Marked congestion seen on section. Papillæ pale and abnormal. Cortex thickened, glomeruli moderately injected. Liver very large, left lobe particularly involved. Surface uneven and marked by numerous granules of various sizes. Granules nowhere sharply limited but marked mostly only by slight and gradual depressions so that there was no great change of level at any place. Surface appears like shagreen with a ground color of pale yellow on which brownish zones were conspicuous. Weight of liver 3100 grams (more than twice the normal weight). Texture, firm and tough. On section, the arrangement of acini can still be detected, the acini appearing as dark brownish red in the midst of broad streaks of yellowish grey connective tissue. Venous channels patulous. Gall bladder contains about 30 c. c. of quite normal bile and a smooth gall stone of the size of a hazel-nut. Common and hepatic ducts and intra-hepatic biliary passages much dilated and everywhere patulous. Their mucous membrane is intact throughout.

Case II. was that of a butcher aged 29

with good family and fair previous personal history except that he had quinsy in his youth and that he was addicted to the use of alcoholics. He presented about the same symptoms as the first patient, and, in addition, he had twice vomited blood to the amount of a pint on the same day. The hæmatemesis had not been repeated. As in the first case, there was a good physical development, normal temperature, rapid pulse, œdema, the last more general than in the first patient, jaundice. The stools were copious, loose, of normal color. There was bronchial catarrh and a mitral direct murmur. The liver and spleen were enlarged as in the first case. Eleven days after entrance, an exploratory laparotomy was made which verified the first diagnosis and revealed no opportunity for improving the patient's condition. There was some suspicion of ecchinococcus cyst, since the patient had had much to do with dogs. The course of the disease was steadily downward. The diarrhœa and the jaundice, including the coloration of the urine, continued. Once there was hæmatemesis. The temperature never exceeded 100.40,° while the pulse remained constantly above 100. The last stage of the disease occupied four or five days, beginning with great restlessness and loud complaints of pain. The patient tossed about and writhed in the bed-clothes but there was no delirium. This condition very quickly gave place to coma from which the patient could scarcely be aroused by shouting and shaking. The pupillary reaction remained.

Tubercular broncho-pneumonia was found post-mortem. The heart was relaxed but the valves were competent in spite of the mitral direct murmur. Three thousand c. c. dark yellow fibrinous fluid was found in the abdominal cavity. The intestines presented the same thickening and roughening of the serous membrane. The gastric mucous membrane was reddened and swollen, especially in the cardiac portion. That of the intestine was in places injected and covered with a bloody fluid. The kidneys were congested and the cortex somewhat icteric in streaks. Otherwise the kidneys were normal. The spleen was large and congested, its capsule thickened, the Malpighian bodies indistinguishable. The liver weighed 3,900 grams. Its serous covering was roughened and flecked with gray. The surface of the liver was uneven from projections of the parenchyma. The consistence of the liver was about as in the first case—tough. The gall bladder and biliary passages were normal.

Case III. was that of a saloon keeper aged 36 addicted to the use of alcohol to the amount of twelve or fifteen glasses of beer daily besides other spirits. Since spring he had suffered from pains in the upper part of the abdomen but which never became intense. Except for the longer duration of the trouble, about eight months, and an early remission, the history was not very different from the previous two. Ascites could not be demonstrated. The lungs were emphysematous and there was much bronchial catarrh. The spleen was so much enlarged as to be palpable. There was little change till two days before death when delirium suddenly set in. After about twenty-four hours coma ensued and death took place soon after with pulmonary œdema. The post-mortem diagnosis was hypertrophic hepatic cirrhosis, hyperplasia of the spleen. broncho-pneumonia of the lower lobe of the left lung, pulmonary œdema, old tuberculosis of the upper lobe of the right lung, purulent bronchitis, gastritis, enteritis. The liver weighed 4500 grams.

Case IV. was that of a man aged 34 who was also addicted to drink. The urine contained albumin and hyaline casts stained yellow. The temperature and even the pulse were normal. The patient was apathetic and made little complaint. Four days after admission he became still more stupid and, soon after, comatose. Death came suddenly. The post-mortem diagnosis was made of hypertrophic hepatic cirrhosis, enlarged spleen, ascites, pulmonary atelectasis, catarrhal bronchitis, pulmonary œdema, gastritis, enteritis. As in the third case, there was only 400 c. c. of fluid in the abdomen. The liver weighed 3500 grams. The biliary passages, as in all the other cases, were patulous.

A microscopic examination was made of the livers from the third and fourth cases, with almost identical results. There was a general and marked formation of new connective tissue. The whole parenchyma was interlaced with anastomosing lines of connective tissue of varying thickness. The new formation of connective tissue did not occur in the acini, but was most

marked in the lobules and was arranged in bands radiating between the liver-cells. The islands of hepatic tissue thus formed were irregular in size and shape and the rows of liver-cells were so compressed and distorted that the original structure was with difficulty recognizable. At times the process of formation of new connective tissue was marked by collections of white blood corpuscles and the connective tissue was composed of fine fibrils interrupted by only a few small nuclei. The liver-cells did not seem to have been destroyed although they appeared, almost without exception, flattened and atrophied in varying degrees. There was no indication of fatty degeneration or a retrogressive metamorphosis. The nuclei remained distinct and took the stain well. In the bands of interstitial tissue were numerous nearly-formed biliary-channels. They possessed a distinct wall lined with cubical epithelium. Their course was at times serpentine, at times nearly straight.

Dr. Freghan proceeds to discuss the various views taken of hypertrophic cirrhosis. Charcot compares it to an experimental hepatitis produced by ligation of the common bile conduit, the former resulting from trouble with the smaller biliary passages, the latter from obstruction to the main duct. Both of these diseases he contrasts as biliary forms with ordinary atrophic cirrhosis which is a venous form of disease. Attempting to follow out this theory, Charcot describes the newly-formed connective tissue of atrophic cirrhosis as being located primarily about the twigs of the portal vein and spreading thence to other parts of the lobule. In hypertrophic cirrhosis, however, he declares that the interstitial formation follows the course of the biliary passages and is located at the periphery of the acini. In this way Charcot explains the frequency of icterus as a symptom of hypertrophic cirrhosis whereas the typical symptoms of atrophic cirrhosis are those of portal obstruction. Ackermann and several others have, however, disproved Charcot's plausible theory of the connective tissue. Ackermann suggests that the essential difference between the newly-formed connective tissue in the two kinds of cirrhosis is its retractile tendency in atrophic cirrhosis and the lack of such a tendency in hypertrophic cirrhosis. He considers as analagous the difference between ordinary cicatrical connective tissue and that formed in elephantiasis and in chronic obstructive hyperæmia. According to Ackermann, hypertrophic cirrhosis is primarily an affection of connective tissue while atrophic cirrhosis consists essentially in a degeneration of parenchymatous cells. Ackermann and Rosenstein compare the hepatic cirrhosis to kidney lesions. Rosenstein compares hypertrophic cirrhosis to the large kidney and particularly to its second stage, and atrophic hepatic cirrhosis to the common contracted kidney.

[Note.—If by "large kidney" is meant the large white kidney and if the "second stage" refers to the fatty and contracted kidney, the analogy does not seem well taken since both of these are lesions of parenchymatous degeneration, while the common contracted kidney marks an interstitial change.—A. L. B.]

To quote Dr. Freghan literally, "The Ackermannisch theory, yes, in many points doubtless overshoots the mark."

Dr. Freghan takes a conservative position with regard to the difference between atrophic and hypertrophic cirrhosis, believing that the former may have an initial stage of increase in the size of the liver and the latter a final stage of shrinking. He lays down, however, a typical triad of symptoms for hypertrophic cirrhosis, namely, (1) enormous, usually gradual increase in the size of the liver, (2) intense icterus usually accompanied by colored stools; (3) ascites lacking or slight. Symptoms of secondary importance are the almost constant enlargement of the spleen and the tendency to gastro-enteritis of hæmorrhagic type. The disease usually occurs between the *second* and the beginning of the *third decennium*s. [Dr. Freghan's four cases were aged respectively 29, 34, 36 and 57]. "The temperature changes are mostly within the normal limits, and evening exacerbations occur seldom." The pulse was about 120 in three of the four cases. This symptom has not been found mentioned in other articles on hypertrophic cirrhosis, The last stage of the disease is attended by an increase of temperature usually with delirium, sopor and coma successively. Cholœmia terminates the chain of symptoms. The duration of the disease is usually stated at three or four years but in this series of four cases it varied from four weeks to one year.

Maugelsdorf could find in the whole literature of atrophic cirrhosis only eight cases reported in which there was icterus; so that this symptom alone has considerable diagnostic value. The differential diagnosis must be made between hypertrophic cirrhosis and tumors. Intra-hepatic tumors are usually carcinoma and multilocular hydatid cysts. The former has icterus and the enlargement and hardness of the liver in common with hypertrophic cirrhosis, but the surface of the liver is usually uneven although the inequalities may not be palpable. The moderate ascites and the earlier age of hypertrophic cirrhosis are diagnostic points. The hard rounded prominences of ecchinococcus cysts, becoming soft later, the tenderness of the liver and its irregular contour distinguish it from hypertrophic cirrhosis. The disease must also be differentiated from a second category of tumors which grow from the larger biliary tubes. If the closure is not complete so that bile passes into the intestines, the diagnosis is difficult. If complete, hypertrophic cirrhosis may be excluded with considerable certainty.

The question naturally arises, why is there jaundice in hypertrophic cirrhosis if the ducts are patulous? Charcot's theory that this trouble consisted essentially of a disease of the biliary radicles has been disproved. Rosenstein has suggested that there is an over-secretion of bile and a lessened excretion through the smaller tubes but this theory does not solve the problem. Dr. Freghan believes that Charcot's theory is in part correct, that some of the biliary passages are involved so that bile is reabsorbed into the blood while other biliary passages are normal and excrete bile into the intestines.

With regard to ætiology, Dr. Freghan adheres to the old view that alcohol is an important factor. He also inclines toward the belief that there may be a tubercular element. At any rate, hypertrophic cirrhosis and pulmonary diseases—especially tubercular—are frequently united in the same patient.

NEURALGIA OF THE TRIGEMINUS.

Dr. Leslie (*Lo Sperimentale*, No. 21, 1891) recommends snuffing a pinch of common salt into the nostril of the side affected, or throwing in a solution by means of a spray.

THE DIAGNOSIS OF SOME ABDOMINAL TUMORS SUPPOSED TO BE OVARIAN.*

By JAMES A. GOGGANS, M. D.,

ALEXANDER CITY, ALA.

Our text-books often lead one to believe that it is quite an easy matter to differentiate between ascites and abdominal tumors, and I have recently noticed that a few writers have, in referring to their series of abdominal sections for various causes, stated that, "no mistake in diagnosis was made in the whole series."

Now, my experience does not lead me to believe that the diagnosis of abdominal tumors is always such an easy thing; and I will make a few remarks on cases which have occurred in my experience which will serve to illustrate the fact that the diagnosis is often difficult, and in some cases indeed, quite impossible without resorting to an exploratory incision.

The specimen which I hold in my hand, is a part of the remains of a cystic ovary and tube removed from a patient, 35 years of age. She was taken with pains in the pelvis after having had her fourth child. This pain continued for four years before the abdomen began to enlarge, and at the time I saw her and removed the tumor the abdomen was extremely large. She had been tapped three times and large quantities of fluid had been withdrawn. The canula had been left in the abdominal cavity for three days, and a solution of iodine had been injected into a cyst which was supposed to exist. I recognized some obscure form of pelvic disease and opened the abdomen for its removal. Two water buckets-full of ascitic fluid escaped from the abdominal cavity, when a cystic ovary as large as an orange was found floating in the pelvis. The cyst was ruptured in the attempt to bring it through the abdominal incision, the pedicle being extremely short. There has been no return of the dropsy, and the patient has made an uninterrupted recovery.

The following case is one of extreme interest, being the only case which has ever recovered in America after operation, and perhaps the only one where operation was

*Read (by title) before the Georgia State Medical Association April 22, 1892,

undertaken for exactly the same condition in this country.

Patient, 21 years of age, had been in bad health for two years, but her abdominal pains had existed only about eight or ten months. The abdominal enlargement was first noticed only three months before I first saw her. Her father and brother, both physicians, had made the diagnosis of abdominal dropsy, and upon my first examination I thought that I had to deal with an ovarian cyst. Upon further investigation I recognized some obscure form of abdominal cyst which could be elucidated only by an exploratory incision. This was made and the cyst proved to be one of the mesentery. The removal of the sac was impossible, consequently it was incised and emptied of a large amount of thin fluid, the incised lips drawn into the abdominal incision, and a glass drainage tube introduced to the bottom of the cyst and drainage kept up until recovery was complete.

The second specimen I show you is a multilocular cyst of the ovary. It was removed from a patient, 45 years of age. The abdomen was quite full of ascitic fluid, and fluctuation in the cyst was very indistinct. In fact the fluid in the cyst was only semi-fluid. The diagnosis in this case was almost impossible. From the fixity of the tumor it seemed to be a most unfavorable case on which to operate; but there was much distress, and as the uterine cavity was not elongated, and there were no other signs indicative of malignant disease, I consented to operate, with the results as I show you. The patient made a perfect recovery.

A few weeks ago I was asked to see a lady who had been told that she was pregnant, and the symptoms pointed very clearly toward pregnancy, the menses having ceased to flow quite suddenly. It turned out to be a dermoid cyst which in all probability may have been solid originally, and very closely connected with the uterus. I must think that all abdominal surgeons who have much experience encounter more or less difficulty in the diagnosis of many cases. And I believe that we should exhaust every means at our disposal to make a perfect diagnosis, but after doing all this, there are still cases where there is manifest serious abdominal disease, and our course is quite clear that we should not wait for a post-mortem examination to clear the way, but should boldly make an exploratory incision and give the patient a chance for life. I can recall cases sufficient to establish in my mind the fact, that many lives may thus be saved, which would, without exploratory incisions, have been sacrificed. I make it a rule to regard all female patients, who are invalids and suffer from incapacitating pains, with surgical suspicion, whether they have a tumor or not. If I can not make the diagnosis perfectly clear, it in no way interferes with me, for I believe the way to duty is quite clear, and that the condition is an unnatural one and demands an operation. I am not an advocate for abdominal section for mere symptoms, especially dysmenorrhœa and the neuroses, but am firmly of the opinion that we should always be able to put our hands on something that we know is pathological, and is causing serious symptoms, before we subject the patient to such a grave procedure. The point I wish to bring out in this paper is, that it is altogether unnecessary to wait and try to map out all of the pathological conditions that may be present in a given case before an operation is undertaken.

RESECTION OF THE INFERIOR MAXILLARY NERVE.

Dr. v. Vamossy reports a case treated by Zuckerkandl's method and describes the operation as follows: "The incision is mada on a line drawn from the tragus to the middle of the naso-labial fold, so that one-third of its length is over the masseter and two-thirds in the cheek. Cautiously dissecting down to the fascia of the masseter, Steno's duct and the facial nerve are to be drawn aside. After the moderate hæmorrhage has ceased, the fascia is opened and the fat removed with forceps and scissors. There is now a cavity, whose bottom is the buccinator, and which is bounded behind by the internal pterygoid and without by the masseter muscle, the ascending ramus of the jaw and the tendon of the temporal muscle. At the posterior part of the latter the nerve is found. It is easiest found by tracing back the branch which is found at the bottom of the wound upon the buccinator muscle. From 2 to 2½ cm. of the nerve should be excised. V. reports a successful case. The only drawback of the operation is its bad cosmetic result."—*Wien. Med. Presse*, No. 48, 1891.

THE ÆTIOLOGY AND BACTERIOLOGY OF DIPHTHERIA.*

By FRANKLYN J. TOWER, M. D.

MILWAUKEE, WIS.

Although this is a subject which is causing a great deal of discussion in the medical world and so much is at present written on it, I have no apology to offer for reading this paper before the Milwaukee Medical Society. The particular point I wish to elucidate and emphasize most strenuously is the examination of all membranes or other exudates in cases of suspected diphtheria and to show the ease with which it can be done by any physician possessing a microscope of four or five hundred diameters magnification and a few modest accessories which should be in the appanage of all practitioners of medicine.

There is probably among the diseases which we are called upon to treat, none more difficult to diagnose than diphtheria; and when we fail to recognize it, in no instance are the consequences likely to be more disastrous to others exposed. On the other hand, when every case of throat difficulty is called diphtheria and treated accordingly, there is an unnecessary isolation, an unnecessary expense both to the government and patient and with but one possible advantage; praise for the doctor upon the rescue of his patient from the grave. On this so-called advantage I think you will agree with me when I inform you that in 880 cases which have come under my indirect notice I find that 50 per cent. recover within 48 hours: and if this is diphtheria it is a disease of most benign type and instead of dreading to care for cases we should delight in a disease with such a termination.

Several have put forth the assumption that filth was the direct cause of diphtheria but all such theories have long since been exploded.

In 1868, Oertel discovered in the diphtheritic exudate a micrococcus; Cohn also found them and called them micrococcus-diphtheriticus; but Billroth, Klebs and others showed them to be the pyogenic bacteria which without doubt we find in a large per cent. of all throat affections and which if in sufficiently large numbers will produce grave and general toxæmia, but such conditions are not contagious and in no case does paralysis follow, and we have usually a rapid convalescence. The pseudo-diphtheria described in which a claim is made that a non-toxic bacillus identical with the Klebs-Loeffler bacillus (to be later described) is found, is probably a pyogenic micrococcic disease with occasional bacilli, for I have failed to corroborate the assertion and believe that there is but one diphtheritic germ and as Roux and Yersin hold that the other bacillus found by some investigators is but an attenuated form of the Klebs-Loeffler bacillus, there being but one thing which may argue against this, i. e., the Klebs-Loeffler bacillus changes the alkaline reaction of the culture media to acid while the spurious bacillus does not.

In 1883 Kelbs isolated a peculiar bacillus always present in diphtheria, conducted many experiments upon it which were verified by Loeffler in 1884 and later by Brieger and Frankel, Roux and Yersin, Simonds, Klein, Welsh and Abbot and many others.

Osler states in his late and very excellent work on practice that the poison of diphtheria is not given off by the breath; but owing to many instances of infection through the air only, with which I am cognizant, I cannot agree with him for I have also been enabled to infect tubes of media with the breath from a diphtheritic blown through a glass tube bent many times, so that fluid particles could not reach the culture media.

To Wagner, Weigert and Oertel are we indebted for the descriptions of the minute changes which take place in diphtheria, the always perfect technology of Weigert showing itself in every case.

Klein, of London, in 22 cases of diphtheria found the Klebs-Löeffler bacillus in all and in those examined in which they were not found the cases were not contagious and recovered rapidly.

V. Bates found with no exception the bacilli in all cases examined.

In the series of 342 cases compiled by Johnston, of Montreal, examined by sixteen different men, 307 cases were found in which the bacilli were present, 35 cases absent, 24 of these were of Dr. Prudden's cases; and it is well here to notice that these were all cases of sore throat of chil-

*Read before the Milwaukee Medical Society, May 24, 1892.

dren, all inmates of an institution in which there was an epidemic scarlatina and erysipelas, so that these should go for naught. The other eleven cases were instances of one or two failures in a large series, as in 52 cases examined by Beck, in two of which he failed to discover the bacillus.

Ruffer in the *British Medical Journal* in a preliminary paper on this subject gives many interesting notes on examination, and also some good staining processes. Simonds in an elaborate article remarks that every false membrane which does not contain the Klebs-Loeffler bacillus is not a diphtheritic product, and writes very exhaustively on the morphology of the organism. In the experiments on animals, of Roux and Yersin, the important fact is disclosed that the bacillus can be found as early as six to fourteen hours after the inoculation, and it is well known that in a 24 hours culture, the bacilli will have developed so that they can be seen in colonies and on steamed potato show the characteristic thin, colorless, glassy scale. It might be well at this point to call your attention to the description of the bacilli under consideration; they are about the length of the tubercle bacillus and twice as thick, that is, about 3μ in length by 6μ in thickness; they exhibit a variety of bizarre and various forms; are often thickened upon one or both ends; in which latter case the central tenuity may be nearly invisible, giving the appearance of a diplo-coccus, and may be sometimes bent like a comma baccillus. They are stained in two minutes in solutions of the methyl blues, or in 15 minutes by Gram's method; they grow well on gelatine bouillon, blood serum, steamed potato, or in sterilized milk, are killed by an exposure to 58° temperature for ten minutes, do not grow, except sluggishly, at a temperature below 18°; they form no discoverable spores, but are extremly tenacious of life, as they may be dried for years and then recover and show their vitality upon implantation in a proper soil; they form an exceedingly active toxalbumin.

In 1890 in one of the numbers of the *Berliner Klinische Wochenschrift*, Brieger and Fränkel give an exhaustive article on ptomaines or bacterial poisons, as they designate them, and give many experiments of the filtered cultures of the Loeffler bacillus. According to their researches, the ptomine is rendered innocuous by exposure to a temperature of 100° for twenty minutes, or two hours at 58°; when injected into animals, caused multiple cell necrosis and paralysis, but no membrane: the actual presence of the bacilli themselves being necessary for the formation of the exudate; the paralysis even occuring after many weeks.

In 1887 Loeffler made the first experiments on this ptomaine by making ether extractions of bouillon cultures and evaporating to dryness, dissolving the residuum in water and making from the resultant solution the inoculations.

According to Roux and Yersin the ptomaine introduced into the stomach causes little trouble; alcohol precipitates it from solution; carbolic acid has also the same property and a small amount added to cultures diminishes their toxicity.

The bacilli are found only in the most external portions of the membrane so that on section and proper staining the bacilli can be seen confined only in that part of the membrane.

This exudate consists of an aggregation of dead cells most of which have become hyalin material; and the nuclei when seen have suffered a fragmentary destruction. The first change which takes place when the bacilli have fallen on a proper soil is a cell necrosis caused by the ptomaine, particularly of the epithelium and leucocytes which become paralyzed and are unable to perform their function of phagocytosis. The irritation causes an exudation of fibrin elements agglutinizing the whole together and the pseudo-membrane has now a layer: and it is thus that there are many layers formed which can be seen by placing a diphtheritic exudate in water when the layers will separate. Following the cell death a hyalin transformation or coagulation necrosis occurs.

At a late meeting of the Berlin Medical Society a lengthy discussion was called out by a paper read by Baginsky on the ætiological relationship of the Klebs-Loeffler bacillus to diphtheria in which the important and general decision was reached that an absolute diagnosis of diphtheria could not be made without a bacterological examination. In 154 cases of so-called diphtheria, Baginsky found the Klebs-Loeffler bacillus in 118, the mortality of which was 40 per cent; only 25 per cent. ran a mild or favorable course; of the 36 cases in

which only cocci were found, only four proved fatal or 11 per cent.; and one of these was complicated with measels and died from pneumonia; two developed bilateral empyema and the other was admitted with a severe paralysis, in which latter case the bacilli had probably given way to the coccic invasion and it was a true case of diphtheria; which would give but a mortality of 8 per cent. in the coccial variety, if I may be allowed the term; and they all developed sufficient complication to prove fatal.

I have six cases which I desire to refer to, all of which have come under my notice in practice. Case one: female, age 18—all the symptoms of diphtheria; exudate covered both tonsils extending back over the entire pharynx, no bacilli found, and on this result called it a tonsilitis—other children were exposed who had not had diphtheria—case recovered in three days and the other children remained well.

Case two: Female, age 7, small patches on right tonsil and uvula, very light case, bacilli present, child isolated but brother came down in a few days.

Case three: Male, age 11, brother to case No. 2, membrane very extensive, great prostration, bacilli found, faucial paralysis developed and remained for a long time.

Case four: Female, age 10, contagion from sister who died three days previous to my being called, membrane extensive, nasal and laryngeal variety and extended as far down as I could see, bacilli very numerous.

Case five: Male, age 6, disease infecting the nose principally, uvula slightly affected, many bacilli present, exposed to child of neighbor who died.

Case six: Female, age nine, membrane extensive, bacilli present both in exudates and in a piece of expectorated membrane, nasal voice and difficulty in swallowing remained for some time.

I have examined all cases of throat disease that have come under my notice and when the bacilli were found I had many reasons also for believing my case to be diphtheria, and when not present I have never seen contagion follow, any paralysis, or even slow convalescence. My method is as follows in these cases—I carry a few cover glasses on my second visit, take two or more, clean them, rub a little of the tonsilar, faucial or nasal exudate on them or put a particle of the membrane between two and press it out flat—slide the glasses apart and dry for 2 or 3 minutes in the atmosphere, put covered glasses together and return wrapped in paper to my pocket until my return home—when in a few minute I find, or not, the bacilli: often times there are micrococci of many kinds and spirilla; even the leptothrix found in the mouth is often seen, but no trouble will be had in seeing and determining the proper bacilli. When the disease has progressed and the Kelbs-Loeffler bacilli are present in considerable numbers they are nearly if not quiet alone. In all cases of suspicious throat difficulties it is well to examine with a view to the determination of the presence of the bacilli. In Case I. which I recited, as in many others which I have seen, I was inclined to call it diphtheria on my first visit, but did not solely because I failed to find the bacilli, and though others were exposed to the case no contagion followed.

I must of necessity arrive at the conclusion that a microscopical examination of membrane or exudates is of much value in the diagnosis of this disease.

A few words on some of the late experiments with the chemistry of the toxalbumins of diphtheria or albumoses as they are now called, will no doubt hold attention. Injections in animals of minute doses produce a Wallerian degeneration of certain nerves, seeming to be greater in motor nerves and to affect particularly the terminals; alternate fibrils are attacked, accounting for the recovery from diphtheritic paralysis, we have therefore in this substance not only a fever producer but a true nerve poison.

By making extracts of the tissues of a corpse dead of diphtheria, doing so within a few hours after death to preclude the entrance of saprophytic bacteria, not only can a toxalbumin be removed, but also an organic acid which has far less virulency when inoculated into animals. These albumoses are precipitated though not coagulated by alcohol, are soluble in water and not precipitated therefrom by ebullition.

According to Roux and Yersin, .0004 gm. is capable of killing 8 guinea pigs of 400 gms. weight each, or two rabbits of 3 kilo-grams each.

Martin concludes that the effect of this poison in the body is a digestive process;

the proteids of the body upon digestion forming these albumoses and organic acid. In anthrax we have an alkaloidal poison; in diphtheria it is probably a ferment. (For discussion, see Society Reports.)

110 Mason St.

SOME POINTS CONCERNING THE OPENING OF THE MASTOID PROCESS.

Heiman (*Arch. of Otol.*, xx, 2) sums up the indications for the operation as follows: 1. In acute purulent otitis media, complicated with inflammation of the mastoid process, when the inflammatoy symptoms do not yield to antiphlogistic treatment and Wild's incision. 2. In acute and chronic purulent otitis media, when the escape of the secretion is impeded by granulations in the middle ear or stenosis of the external auditory canal, or when there is a suspicion of inflammation of the mastoid process. 3. When the mastoid process is apparently healthy, but the removal of pus or cholesteatomatous masses through natural channels is impossible, and symptoms dangerous to life manifest themselves. 4. In congestive abscesses and fistulas in the region of the mastoid process. 2. In persistent, continuous pain in the mastcid process, yielding to no other treatment, especially when it seems sensitive to pressure. 6. As a prophylactic operation, in symptoms of retention of secretion and inflammation of the mastoid process when death is to be feared on account of imperfect disinfection. 7. In acute purulent otitis media, in which there is no inflammation of the mastoid process, and no retention of secretion, but in which the discharge is very profuse, does not yield to the usual methods of treatment after a certain time, or even increases. 8. When there are distinct symptoms of inflammation of the brain and the meninges.

Heiman has used the trephine *á crèmaillière* of Pasteur for opening the mastoid, and has received the following impressions from its use: 1. The removal of the compact portion of the mastoid process is much more rapid than with the mallet and chisel. 2, The edges of the wound need not be rendered smooth after the operation. 3. The different size of the trephines permits the formation of a wound in the bone of the desired size. 4. Shock is entirely obviated. 5. The depth of the wound can be graduated with exactness.

Society Reports.

MILWAUKEE MEDICAL SOCIETY.

Stated Meeting, May 24th, 1892.

Dr. F. J. Tower read a paper on the Ætiology and Bacteriology of Diphtheria. (See page 181.)

DISCUSSION.

Dr. Miles H. Clark: I have very little to say in opening this discussion, except words of commendation for the paper of Dr. Tower. I do not think that there can be any doubt in the minds of any of us as to the advisability of microscopical examination in order to determine a doubtful case. As far as I myself am concerned, I have been singularly fortunate, in having but one case of diphtheria since I have been in the city, but I have had any number of cases of tonsilitis and cases doubtful enough in my own mind so that I have been rather suspicious and at certain times anxious, for fear that contagion to other members of the family might follow; and it seems to me that with this method before us, properly carried out, that many times, not only the lives and safety of other members of the family can be cared for, but also the extreme annoyance to the members of the family itself from having a case placarded which is not diphtheria avoided; and I have no doubt that very many cases have been thus reported which were not diphtheria. I have seen many cases of tonsilitis with the tonsils completely covered with membrane from the coalescence of distinct follicles or follicular patches, which have recovered in the usual short time of a tonsilitis; but if such case as that had furnished contagion for a family of four or five children, and had resulted in diphtheria to the rest of them after I had called it tonsilitis, I might have felt very much ashamed of myself. For this reason I would simply commend the examination of the exudates in this manner.

Dr. F. E. Walbridge: I would like to have the doctor give us his methods of staining the bacillus.

Dr. A. B. Farnham: The infecting poison is a ptomaine. The bacillus forms a slight layer and the ptomaine causes the fever, as I understand it. A practical

question came up to me once this summer. If you will notice at the commencement of the disease, you will see a first glassy layer and if you treat that layer with a solution of chromic acid of sufficient strength and penetration to destroy it, could not the case be cured? The only case of diphtheria that I have treated in a family here in Milwaukee was one in which I saw that very first infection, a small, glassy layer. I happened to be treating a throat disease and it developed this, and on just that merest commencement I made a diagnosis which proved to be correct, and I have thought since that if that had been destroyed then and there, the whole difference might have been ended. Once this summer I saw that same appearance and I did treat it with chromic acid and it was the end of it.

Dr. S. W. French: We might as well tell of our failures as our successes. It will be remembered that a few weeks ago I reported some possible cases of abortion of diphtheria by the use of submucous injections of chlorine water. It was not very many days after that when I was called to a case that had undoubted symptoms of diphtheria, and I gave it a most thorough injection, and I used chlorine water that there was no doubt about whatsoever. There was some doubt, I will say, in regard to the other cholorine water that I used after I had seen this. I gave that case an injection on two successive days and gave it very thoroughly, but the case went from bad to worse and is now under the sod. Dr. Tower made the statement that the bacilli were found on the surface. Seibert, however, in his paper in the matter of the use of chlorine water, says that the bacilli are found in the sub-mucous layer and that is the reason he gives them the submucous injection of chlorine water, to kill the bacilli in their nest holes, so to speak.

But there is one other point. Dr. Tower has said in his paper that it is, as I understand it, beyond a doubt established, that this so-called Klebs-Löeffler bacillus is the bacillus of diphtheria. I should like to know if that is a positive fact; if it has been proved over and over again a sufficient number of times to establish beyond a doubt that it is the bacillus of diphtheria.

Dr. W. H. Washburn: From my reading, it has not seemed to me as though the question of the ætiology or the materies morbi of diphtheria was yet absolutely determined, although especially during the last two or three years the evidence seems to be growing stronger and stronger that the Klebs-Löeffler bacillus is the materies morbi of the disease, yet if you will look over the files of the medical journals, you will find that a great many cases are reported that have presented all of the appearances of diphtheria, both as to the course and termination and following paralyses, and many cases also with the element of contagiousness present, where this peculiar bacillus has not been found.

Dr. Tower referred to the cases of Baginski. The impression that I derived from reading the report that I saw of that paper was somewhat different from the way he stated it in his paper. There were quite a number of cases that presented every appearance of diphtheria except that they did not contain these bacilli; and a certain number of those were fatal and were followed by paralysis of the pharynx, and I believe that those cases were cited to illustrate the fact that it was not so certain after all that the Klebs-Löeffler bacillus was the actual active agent in the disease; nevertheless the mortality among those cases was much less than among those in which this bacillus was present.

I think that we would gain considerably if we were all of us expert enough with the microscope to be able to recognize these bacilli; but I do not think that if I had Dr. Tower's paper as a guide and my microscope beside me that I would be able to make a satisfactory examination of the sputum. It does not seem to me as though he has gone sufficiently into the subject of the preparation and characteristics of the bacilli to enable one who is not already expert in the study of bacteriology, to the discovery of this bacillus.

Dr. A. J. Puls: I just want to make this point, that Dr. Tower stated that contagious diseases of the throat he classes always as diphtheritic. It seems to me that I have seen a number of cases of ordinary tonsilitis which was just as contagious as diphtheria, although the disease appeared in a benign form; so also coriza.

Dr. U. O. B. Wingate: It is well known that we have a great deal of diphtheria in this city. During the past year 1891, there were four hundred deaths recorded, and usually where a death certifi-

cate comes in, it is pretty sure that the diagnosis has been correctly made as diphtheria. Undoubtedly there are a great many cases of diphtheria reported that are not diphtheria, but I think that the physicians of the city as a rule are inclined to give the public the benefit of the doubt and report the cases. It is a commendable practice, I believe, and unless there is some way of making a positive diagnosis, as Dr. Tower has stated in his paper, it seems to be the best course to pursue. Certainly it is much better to report a case that is not diphtheria than it is to fail to report a case that is genuine diphtheria, if we are to attempt to do anything in the way of prevention. There are certain wards of the city, I have noticed in looking up the records of the past year, that show a very marked dissimilarity in the proportion of the number of cases reported and the deaths. Some wards show a very large mortality compared with the number of cases reported and others a very small mortality.

There are two questions I would like to ask Dr. Tower, one is, is it not well recognized that you may find bacillus of diphtheria in a throat that does not have diphtheria and which may recover without having diphtheria, or even in perfectly healthy throats? The other question is in regard to the degree of temperature which will destroy the bacillus, which I do not quite understand?

Dr. F. J. Tower: In answer to Dr. Walbridge about the staining of these bacilli, there is probably nothing easier to do in a microscopical way. All the necessary chemicals that are needed are a small amount of a Methyl blue, probably Grieber's blue is about the best that can be had; it can be made in an aqueous solution, or it can be made in what they call Löeffler's blue which is an extremely weak solution of caustic potash with the aniline dye dissolved in it, making a saturated solution in alcohol; and when you want to use the staining material add five or six drops of the saturated alcoholic solution of the aniline to a watch-glass full of water; pass your slide through an alcohol-flame or gas-jet two or three times to set the albuminous substances, then place it in your watch-glass of blue water and hold it over the burner or gas-jet and heat it until it steams; do that for two or three minutes or until you bring it to the boiling point, then let it stand for four or five minutes; take the cover-glass out of the blue solution, wash it in water, put it proper side up on a slide and examine it immediately, pressing out the superfluous water. Probably there is no easier thing to do than to make that examination. If you are in doubt as to the presence of the bacillus, take a potato, which need not be sterilized, put some of the exudate on it and keep it at about the temperature of the body, about thirty-eight degrees; leave it there for five or six hours or until the next morning, then take a little of this glassy film which forms. The Klebs-Löeffler bacillus under proper temperature grows with extreme rapidity, whereas other bacteria that would interfere with our examination do not, so that it is really unnecessary to sterilize the media that we use for examining or hunting for the Klebs-Löeffler bacillus,

In answer to Dr. Farnham about the the ptomaine, as I understand it, I think the definition for the word ptomaine means alkaloidal-poison. According to the late experiments made with this substance produced by the Klebs-Löeffler bacillus, it is not a true ptomaine, it is an albuminous substance. This glassy layer that the doctor spoke about is exactly what is seen on a potato or on gelatine. The finding according to Seibert of the bacilli in the submucuous tissue I doubt. I have made lately some sections of diphtheritic membrane according to new processes and find that the bacilli are with possibly an exception or two, all contained in the outside, so that if we take a piece of membrane say one-eighth of an inch thick and properly stain it, when it is thoroughly washed out and held to the light, we will see a fine blue line in some cases where the bacilli are; oftentimes they do not seem to be able to puncture through the membrane. Otherwise, why do not the bacilli enter the body, and it is a known fact that they do not. As far as the Klebs-Löeffler bacillus being the cause of diphtheria is concerned, I did not know that there was any doubt about it, but there may be. As good men as I have quoted in my paper, men that are continually working on that subject, almost no other subject, claim that it is a fact. My own experience has been limited; I have had a very few cases to examine actually, but in those cases where I have, as I state, I found the Klebs-Löeffler bacillus,

and where it was a case that had progressed considerably there were no other bacteria found at all.

Dr. Washburn said that he had a different idea from a certain paper by Baginski. Baginski did in his article call out both sides of the question. My reference to that paper was only in this way, to the opinion of the other men present who were probably at this meeting in Berlin lately, some of the most eminent men there are in the world, and the general opinion arrived at seemed to be that a bacteriological examination was necessary, as I stated.

In regard to not being sufficiently plain in my methods, I think I have covered that point now. About the contagiousness of choryza and tonsilitis, that certainly is possible; but the contagion that we have there as due to the streptococcus and the cephalococcus pyogenus due to pus microbes. I think Dr. Weurdemann will tell you, as I believe, that some cases of otitis media are contagious, and probably for the same reason. Dr. Wuerdemann, could not such a case of otitis media produce an ophthalmia?

Dr. H. V. Wuerdemann: Yes, sir. Otitis media, however, is contagious indirectly, i. e., the nasal affection disease is contagious; and coryza is contagious, producing a purulent ear disease, then eustachian salpingitis, and after that, middle ear disease.

Dr. Tower: In answer to Dr. Wingate about finding the Klebs-Löeffler bacillus in non-diphtheritic cases, I doubt if it is so found. It has been to my mind proven, where there is a considerable number of Klebs-Löeffler bacilli present, the substance which they produce being a ferment, a minute quantity of it in the circulation seems to act as ferment, and that minute quantity it is necessary to have but a very small number of Klebs-Löeffler bacillus present to produce, so that if we had a case with any discoverable number of Kelbs-Löeffler bacilli in the throat, we would probably have some systemic effects also. I believe that some investigators, I could not name them now, have claimed that they found occasionally the Klebs-Löeffler bacilli in sputum, in faucial mucous, but there is, of course, in those cases where you find one or two, the possibility of not only their inability to discover them, but also it is very easy to make a mistake in the bacteriological examination, if everything is not absolutely and scrupulously clean, in which case you are bound to have some kind of outside infection.

In regard to the temperature necessary to destroy the Klebs-Löeffler bacilli, probably it was a little bit misleading, as I used the centigrade scale. Exposure at a hundred degrees or boiling point is sufficient to destroy them. The Klebs-Löeffler bacilli themselves grow but very sluggishly at a temperature below 18 degrees centigrade and do not grow above 58 degrees centigrade which would be about 140 degrees Fahrenheit.

Dr. A. B. Farnham: I believe that the authorities state that an exposure to a temperature of 140 degrees for ten minutes will destroy the Klebs-Loeffler bacillus; of course a higher temperature is usually employed, 200° or 250°.

Dr. W. H. Washburn: The doctor spoke of the bacillus being present on the surface of this false membrane, and in his remarks he said—at least I so understood him—that if the bacillus was on the under surface of this false membrane, why didn't it get into the blood. We know that these bacilli do not get into the blood. Is it not a fact that these bacilli have been injected subcutanously under the skin of the animals and yet have not got into the blood? If I am not very much mistaken, experiments of that kind have been repeated time and again. The bacilli have been injected subcutaneously and still have not found their way into the circulation, but remained right where they were injected; and hence the objection that the bacilli were not on the under surface of the membrane, because they did not get into the blood, would not be tenable.

SEPSIS OF THE UMBILICAL WOUND.

Eross (*Arch. f. Gyn., B.* xii., H. 3) observed the process of healing of the umbilical wounds in 1,000 new-born infants under different modes of treatment. A strictly normal course was the exception rather than the rule. Morbid conditions of greater or less gravity were found in sixty-eight per cent. These consisted in sloughing of the stump, softening instead of complete mummification, decomposition of fragments left undetached after the rest had separated, suppuration and gangrene. Pyrexia occurred in 220 cases and in a certain proportion of instances was the only evidence of septic absorption.

Selected Formulæ.

FOR HOARSENESS.

In addition to the measures employed in the treatment of the causative condition, the following formula will prove useful in the amelioration of hoarseness:

℞ Acid. tannic.....3j.
Pulv. sodii biborat.....3j.
Tinct. capsici .....f3ss.
Aquæ rosæ.....f3x.—M.
S.—To be used frequently as a gargle.

—*Whitla.*

FOR LARYNGEAL PHTHISIS.

In the treatment of this affection, Cozzolino (*Revista de Ciencias Médicas de Barcelona*, April 25, 1892) employs this mixture:

℞ Pulverized iodoform..... 5 00 grammes.
Powd. phosphate of calcium.10.00 grammes.
Boric acid, in powder..... 5.00 grammes.
Menthol.. .....From 40 to 80 centigrammes.
M. Sig.—To be insufflated into the larynx, night and morning.

FOR SYPHILIS.

The following mixture is recommended by Stukovenkoff and Balzer (*Jour. des Maladies Cutan. et Syphlit.*, April, 1892), in the treatment of syphilis:

℞ Benzoate of mercury..... 0.40 gramme.
Iodide of potassium..... 20.00 grammes.
Distilled water..... 25.00 grammes.
Simple syrup..... .....1000.00 grammes.
M. Sig.—A dessertspoonful a day.

THE USES OF RESORCIN.

The therapeutic uses of resorcin are carefully reviewed in *Il Raccoglitore Medico*, April 30, 1892, and the following prescriptions recommended:

For *acute gastritis, dyspepsia, etc.*

℞ Pure hydrochloric acid.
Sublimated resorcin, of each.... 2.00 grammes.
Syrup of orange peel..... 20.00 grammes.
Distilled water.....178.00 grammes.
M. and place in a dark bottle. Sig.—A tablespoonful every two hours.

For *catarrh of the stomach:*

℞ Infusion of rheubarb root .....180.00 grammes.
Sublimated resorcin..... 3.00 grammes.
Bicarbonate of sodium..... 8.00 grammes.
Peppermint water..... 10.00 grammes.
M. and place in a dark bottle. Sig.—A tablespoonful every hour.

For *carcinoma of the stomach:*

℞ Decoction of condurango.....180.00 grammes.
Tincture of rheubarb..... .... 5.00 grammes.
Sublimated resorcin..... 2.00 grammes.
Syrup of orange peel..... 20.00 grammes.
M. and place in a dark bottle. Sig.—A tablespoonful every hour.

For *sea-sickness:*

℞ Sublimated resorcin.....0.1 to 0.75 gramme.
Sugar of milk.....0.5 gramme.
M. and make thirty papers. Sig.—A powder every hour.

EARACHE.

When due to inflammation of the external meatus, it is well to scarify first, and then to make use of aural suppositories or tampons, about one-third inch long, and composed of:

℞ Morphin. sulph.
Cocain. hydrochlor.....āā cgm. 10.
Gelatin.....grm. 90.—M.

Or, the canal may be irrigated by 6-per cent. solutions of cocaine, or 20-per cent. solution of carbolic acid in glycerin.

—*Giornale Internatz. delle Scienze Med.*

CAVAZZANI'S ANTISEPTIC POWDER.

To improve upon the antiseptic virtue of iodoform and at the same time to diminish tendency to cause bleeding, Cavazzani (*Wein Med. Presse*) has devised the following:

℞ Iodoform .....P. 55.
Salicylic acid.....P. 20.
Bismuth subnitrate.....P. 20.
Camphor ..... 5.

This mixture has proven an excellent disinfectant and stimulant in cases of bubo. Its use must be suspended every fifth or sixth day, iodol being employed instead.

SUPPOSITORIES OF MORPHINE AND COCAINE IN PERITONITIS.

Dr. Klefer (*Le Bulletin médical* No. 44, 1892), in order to combat the pain and vomiting of peritonitis, employs the following suppository:

℞ Extract of opium..... } āā cgms. 6.
Hydrochlor. cocaine ..... }
Iodoform ..... } q. s.
Cacao butter..... ....}

NUTMEGS IN HÆMORRHOIDS.

The common nutmeg employed in the form of an ointment is said to give prompt and permanent relief in itching and painful piles. It may be employed as follows:

℞ Pulv. nuc. moschat.....3ij.
Acid. tannic.....3j.
Petrolat .....3j.
M. Sig.—Apply locally.

—*Ex.*

CORYZA.

℞ Naphthalin in an impalpable powder..3vj.
Powdered boric acid.....3vj.
Powdered camphor.....gr. xv.
Extract of violets.....gr. xv.
Essence of roses.....gtt. xx.
Sig.—Mix and use as a snuff in coryza.

—*L'Union Médicale Therap. Gazette*, May 16, 1892.

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Leading Articles.

CARBOLIC ACID GANGRENE.

The profession has recently been warned more than once through the unfortunate experience of surgeons that the use of carbolic acid solutions as a surgical dressing is frequently followed by grave complications, amounting in some cases to a condition of dry gangrene of the parts that have come in contact with the acid. This complication may result when the original injury is only trivial. The first symptom the patient will complain of is a numbness of the parts, or a prickling sensation, this is frequently followed by severe pain, and upon removal of the dressing the parts below it will be found to have assumed a dark blue or black color, to be without feeling, and in other words, to present the typical picture of dry gangrene.

Billroth, the German surgeon, has some time since called the attention of the profession to the danger attending the use of carbolic acid, and his warnings were quoted by nearly all the leading German medical journals. Strange to say, apart from the histories of a few cases published by Kortum, no further mention has been made of the subject in German literature. Kortum sought to explain this unfavorable action of carbolic acid, by crediting it to an action upon the vaso-motor nerves.

It has however, been the privilege of Dr. A. Frankenburger, of Nurenberg, in his able Inaugural Address before the University of that city, to definitely settle the question of the cause, and to throw much valuable light upon the subject. His address has also been discussed editorially in a recent number of the *Medicinische Neuigkeiten.*

In France the subject has been widely discussed, and among French writers on the subject the dissertations of Tilleaux and Secheyron are perhaps most notable. It is evident that the conditions produced

are not merely the result of the cauterizing effect of the acid, as suggested by Billroth.

Frankenburger, to settle the question, conducted a series of experiments upon animals, the results of which appear to be most conclusive. He applied the acid in the form of a 3 per cent. or 5 per cent. solution upon a bandage covering the intact skin of the animal. The parts over which the bandage was placed were shaved, and the dressing kept constantly moist with the solution. Every half hour microscopical examinations of a portion of the skin were made, and the experiments lasted for about three hours in each instance.

In every case a typical "mummification" of the skin was observed, which gradually encroached upon the deeper tissues the longer the application was continued. The microscopical appearances of the preparations were very characteristic and similar in every case.

The epidermis was destroyed, and the papillæ of the chorium were laid bare; there were large gaps in the connective tissue due to an enlargement of the lymphatics; the lumina of the vessels were filled with a partly yellowish red and partly yellowish white masses,—viz., vascular thrombi.

That these thrombi are really formed *intra vitam* during the course of the experiments, is proven by the results of many authors who have studied the action of carbolic acid upon the blood, among whom we may mention, G. G. Bill, Huchs, Prudden and Hueter. These writers have observed as an action of the acid a change of the blood corpuscles, consisting in a degeneration of the red corpuscles and accession of the amœboid movements of the leucocytes. This has been shown by direct examination of the mesentery of a curarized frog, as a direct action of the acid. Frankenburger's experiments show that a similar action is obtained by the mere application of dressings moistened with a weak carbolic acid solution. He summarizes the results of his experiments as follows:

If parts of the human body, intact or else having slight injuries, be brought in contact with a carbolic acid solution of 2½ or 2 per cent. strength, the action of the acid will in predisposed cases cause a gangrene of these parts extending as far as the application.

This gangrene assumes the typical appearance of dry gangrene. It is caused by the formation of thrombi in the vessels, and if the application be kept up for a sufficient length of time will result in an entire occlusion of all the vessels in the field of contact, thus robbing the parts of all nutrition.

This thrombosis and subsequent occlusion is directly caused by the degenerative action of carbolic acid upon both the red and white blood corpuscles. There are no circulatory disturbances of note caused by the action of the acid upon the vasomotor nerves.

The longer the acid is allowed to remain in contact with the parts, the deeper the gangrene will spread.

This action is especially frequent in such parts as are entirely surrounded by the dressing—notably the phalanges of the extremities.

The use of carbolic acid in the form of moist dressings is especially prone to cause gangrene.

The danger of carbolic acid gangrene is especially predominant in weak subjects, women and children.

In conclusion, we would infer from the results of these observations and experiments that the use of carbolic acid as a dressing in minor or major surgical operations should be restricted as much as possible, and other equally efficacious antiseptics substituted; and, finally, that the profession should warn the laity against the indiscriminate use of the drug in the treatment of injuries.

Book Reviews.

TREATISE ON MEDICAL AND SURGICAL GYNÆCOLOGY. By S. Pozzi, M. D., Professeur Agrégé à la Faculté de Médicine Chirurgien de l'Hôpital Lourcine-Pascal, Paris. Complete in Two Volumes. Translated from French Edition under the supervision of, and with additions by, BROOKS H. WELLS, M. D., Lecturer on Gynæcology at the New York Polyclinic; Fellow of the New York Obstetrical Society, and the New York Academy of Medicine. Volume Two. With 174 wood-engravings, and 9 Full-page Plates in Color. Royal Octavo. 174 wood-cuts. Muslin, $6.00; sheep, $7.00; half morocco, $8.00.

The first volume of Pozzi's Gynæcology was favorably noticed in these columns some months ago. Volume second fulfils all the expectations raised by its predecessor. Undoubtly the work will take rank as the leading exposition of modern gynæcology. It is not to be expected that every theory and every statement of the author will find acceptance; but his book is so comprehensive, progressive, and so distinctively fresh and modern that it must gain universal favor. It is refreshing to find many untenable theories of the older authors (especially as to the pathology and therapeutics of pelvic imflammation and extra-uterine pregnancy) ignored, and instead to find modern theories based upon the facts proved by the experience of the past twenty years. Gynæcology has developed so marvelously during this time, and the mass of facts accumulated has been so great, that it is now possible to write a scientific treatise upon this subject. It is no longer possible to sustain theories either as to pathology or treatment upon reputation of their discoverers and promulgators. Hence we can chronicle the passing away of the but recently accepted theories concerning pelvic inflammation, cellulitis, pelvic abscess, hæmatocele, displacements of the womb, the perineal body, etc.

Chapters I–IV deal with the many and complex problems of pelvic inflammation in a manner which will find approval with all who have had opportunities for studying the subject not only clinically but also by abdominal section. Special statements will, of course, be challenged, but on the whole we know of no exposition of this subject equally good. The author regards sepsis in childbed and gonorrhœa as the great causes of pelvic inflammation. He considers also that almost without exception the extension of the inflammation takes place along the mucous lining of the uterus and tubes, and yet he distinctly upholds the doctrine that at times—especially if not exclusively during the puerperal state—extension takes place along the lymphatics. The doctrine is laid down in positive terms that salpingitis is precedent to and a part of almost every case of peritonitis; and this is emphasized by treating the subject under the title perimetro-salpingitis. The innovation is to be commended as fixing upon the mind of the student the fact that almost without exception salpingitis precedes, causes, and is a part of pelvic peritonitis. The strictly minor rôle of inflammation of the pelvic cellular tissue also is amply elaborated. It occurs at times as a result of puerperal infection. This is the usual form. It occurs also as a result of inflammation of the uterine appendages. Pozzi also admits (but gives no proof) that it occurs as a result of dirty operations upon the uterus. In view of all the facts proof should have been forthcoming for this statement to gain credence. Well-observed cases, with autopsies, as for instance those reported by Coe, of the Woman's Hospital in New York, of deaths from septic inflammation following operations on the uterus, show that in such cases the inflammation spreads to the peritoneum through the Fallopian tubes. The portion of these very excellent chapters most open to criticism is that relating to the treatment of pus in the pelvis. The author admits the propriety of *simple incision* of the pus collections under several conditions—at the same time admitting the danger and deficiencies of the method. Many excellent gynæcologists absolutely reject such measures, and treat all such cases by cœliotomy; others probably with greater wisdom reserve incision for cases of broad ligament abscess, or suppurating hæmatoma—both rare conditions—and certain cases of pelvic abscess when the patient is exhausted and suffering from general sepsis. In the last class of cases by evacuating the pus the patient can at times be improved so as to withstand the shock of a radical operation to remove the abscess sac.

Chapters V—IX treat of tumors of the uterine appendages, broad and round ligaments. The treatment of these subjects is satisfactory, but conventional. Chap- X is devoted to genital tuberculosis, and

Chapter XI to hæmatocele. Unfortunately this was written before the general acceptance of the fact that most cases of hæmatocele are cases of ruptured tubal pregnancy. The author advises the policy of doing nothing, which is clearly inadmissible because of the dangers of recurrent and fatal hæmorrhage. While it is true that cases of hæmatocele recover under the expectant treatment, it is none the less true that very many die from further hæmorrhage. Fortunately abdominal section in good hands will save almost every case.

Chapter XII covers the subject of ectopic gestation admirably. The author everywhere takes advanced ground. The work of the past is chronicled and due praise given to the many who have added to our knowledge of this subject. But great advances are predicted for the future. The currently accepted pathology in given, primary abdominal and ovarian pregnancy being admitted. But these are regarded as most rare, and due caution is exercised in accepting doubtful examples. Werth's view that an ectopic gestation should be regarded as a malignant tumor, to be removed promptly after its discovery, is commended. Prompt removal of the gestation sac is advised in all cases before the fifth month; injections of morphia, and electricity are condemned, as being uncertain if not unsafe. The dangers inherent in the condition are considered greater than those of the operation. It is gratifying to find such sound doctrines taking vigorous root in French soil. Prompt operative interference is advised also for the later months. The dangers of hæmorrhage and septicæmia being regarded as greater that those of an operation. It is pointed out that recent operations have been much more successful than older ones. Thus up to 1886 Harris reports thirty sections done during the viability of the child with five mothers and sixteen children saved; whereas since that date of thirteen cases, nine women and eleven children were saved. Much is expected from prompt operation with a perfected technique. The author states, "here, as in all the problems of abdominal therapeusis, the theoretical objections of a timid surgeon fall before the results of a bolder practice characterized by good technique." The results under expectant treatment until after false labor having been so deplorable, the courageous surgeon will be emboldened to apply his art for the relief of these women in such peril of their lives. With modern hæmostatic forceps and an abundance of gauze for packing, the skillful surgeon should be able in most cases to successfully remove the gestation sac and add another triumph to abdominal surgery. Cases in which the placenta grows from the intestines will probably remain a dangerous class to deal with.

Chapters XIII—XXIII deal with diseases of the vagina, vulva and perineum. Chapters XXIV—XXVI treat of malformations of the genital organs and Chapters XXVII—XXVIII of diseases of the urinary tract, rectum, and pelvis, thus giving the book a wider scope than is usual with treatises upon gynæcology.

Periscope.

THERAPEUTICS.

TINCTURE OF IODINE IN INFECTIOUS ULCERS OF THE CORNEA.

Chibret (*Rec. d'ophthal.,* September, 1891) thinks he has found in tinctures of iodine the following necessary properties: 1. A powerful and general antiseptic action. 2. Energetic dialytic power. 3. Absence of formation of insoluble salts causing indelible opacities of the cornea. 4. Non-destructive effect on the cornea. He thinks his belief in the value of this drug has been fully justified by ihe results, and he even recommends its use in corneal scars and opacities.

TREATMENT OF THREAD WORMS.

Heath (*British Medical Journal,* December 10, 1891, p. 1300) writes that within the last few years the views about ascarides have greatly altered. It used to be thought that they lodged entirely in the rectum, and that the patient could be cured by copious enemata, usually of salt and water. But it has been shown within the last few years that it is not a fact, and that these ascarides have their habitat mainly in the cæcum, and are to be found, more or less, throughout the whole length of the large intestine. It must, then, be borne in mind that it is not sufficient to attack the rectum with enemata, but purgative medi-

cine must also be given which shall act upon the cæcum and clear away the worms themselves and the mucous in which they are lodged. You may often see them coming away in large balls as the result of purgative medicine, and until they are thoroughly cleared out you cannot hope to cure the patient.

CANTHARIDINATES IN TUBERCULOSIS.

Demme (*Therap. Monatsh.*, March, 1892) has treated 30 cases by subcutaneous injection. The potassium salt was used at first, but the sodium preparation gave rise to less pain. There was never any suppuration at the site of the injection, but in one case a considerable swelling occurred without any reddening of the skin. It took long to subside. The dose used was 0.0001 to 0.0002 g. In 10 cases of more or less severe laryngeal with pulmonary tuberculosis no conclusion could be formed owing to the insufficient length of the treatment. After giving short details of the remaining 20 cases, the author makes the following remarks: Results are obtained by this treatment more surely than by any other method. The drug must be used with great caution, for albuminuria appeared in every case. This albuminuria lasted longer than the treatment in 5 cases. The effect on the lungs is slight, but expectoration becomes easier. In the larynx the œdema, especially that over the arytenoid cartilages, disappears almost completely. More solid infiltrations also tend to become smaller more quickly than under other treatment. While some cases were greatly improved and might (if the albuminuria could be avoided) be looked upon as cured so far as the larynx was concerned, two were certainly cured. In other cases temporary improvement alternated with relapse.—*Brit. Med Jour.*

LOCAL APPLICATION OF CALOMEL IN INFLAMED HÆMORRHOIDS.

Dr. B. James (*La Semaine Médicale*, No. 11, 1892) has employed with success for several years the local application of calomel in inflamed hæmorrhoids. The remedy is applied topically by the fingers to the swollen and inflamed parts. This rapidly causes all the morbid symptoms to disappear. The writer has not seen a single case resist the action of this remedy.

MEDICINE.

EMIGRATION OF LEUCOCYTES FROM THE TONSILS.

Dr. Polyak finds that most of the leucocytes which in a normal condition of the tonsil migrate through its epithelium into the buccal cavity are lymphatic corpuscles (lymphocytes)—that is to say, young elements generated by karyokinesis of the cells of the adenoid tissue. There are, however, in addition, a considerable number of leucocytes with polymorphic nuclei which migrate from the superficial capillaries and capillary veins. The emigration of these multi-nuclear leucocytes is also observed in places where there is fibrous connective tissue beneath the epithelium. The emigration of large numbers of lymphocytes is accompanied by well-marked destruction of epithelium close to the free surface, but the emigration of the multinuclear leucocytes only appears to give rise to increased exfoliation of the superficial epithelial cells. When acute inflammation of the mucous membrane was induced by irritation with chemicals, the emigration through the many layers of flattened epithelium was mainly confined to multinuclear leucocytes.—*Lancet.*

ON THE KNEE-JERK IN THE CONDITION OF SUPERVENOSITY.

Dr. T. Hughlings-Jackson makes a short preliminary communication on this subject in the *British Medical Journal*, 1892, No. 1624. He has observed absence of knee-jerks in some cases of emphysema with bronchitis, where the blood has become venous in an extreme degree. As the patients observed were near death, he hesitates to conclude that they were absent as a mere consequence of supervenosity. He quotes the case of a girl of nine years suffering from diphtheria, who was tracheotomized at midnight for urgent respiratory difficulty, producing cyanosis. Before the operation her knee-jerks were absent. On the following day, the cyanosis having then disappeared, the jerks were obtained and remained present until her discharge from the hospital. The knee-jerks of a dog artificially asphyxiated by clamping the trachea were absent in the

third stage of asphyxia, having been exaggerated in the earlier stages of the condition. It is suggested that the preliminary exaggeration was owing to the loss of cerebral control over the lumbar centres, the eventual loss being occasioned by the succumbing of these strongly organized spinal centres to the poisonous influence of supervenous blood.

The testing of knee-jerks before and after the administration of oxygen to cyanosed patients may be expected to throw light on the question. If supervenosity is a cause of loss of knee-jerks, that fact may be important in the apoplectic state, and possibly somewhat with regard also to post-epileptic coma. Careful observations on such cases may be productive of valuable results.

ANKYLOSTOMIASIS THE BERIBERI OF ASSAM.

According to the *Indian Medical Gazette* for February, 1892, Dr. G. M. Giles finds that the disease known as the beriberi and the kala-azar of Assan are identical, and that they are in reality ankylostomiasis caused by the *Dochmius duodenalis*. This parasite, Dr. Giles finds, develops slowly if at all in drinking-water, but develops plentifully in fæces. The ingress of the parasite into the human system is believed to be due to the habit of cleansing kitchen and table utensils with infected earth, and of eating food from a mat on the ground. The symptoms and causation of the disease are the same as those found by Dr. Kynsey in the so-called beriberi of Ceylon.

THE CEREBRAL CIRCULATION DURING HYPNOSIS.

Drs. Sarlo and Bernardina (*Rev. Sperimentale* XVIII, III), publish an article on this subject in which they discuss some of the physiological literature and elaborately report a case in which they were able to make a careful study of the cerebral pulse through an aperture in the skull due to an old traumatism, and their paper is illustrated by sphygmographic tracings. The authors conclude as follows: (1) The cerebral circulation is different according to the hypnotic conditions, it appears that there may be hyperæmia in the reduced lethargic state and anæmia in the thus induced cataleptic condition. (2) Everything leads us to believe that antagonism between the cerebral and the peripheral circulation, during tne hypnotic state does not exist. (3) A greater frequency and an apparent increase of the respiratory oscillations are observable in the hypnotic condition. (4) The psychic functions, during the hypnotic conditions, incite a vascular reaction, identical with that which occurs in the normal state, but less marked on account of the existing vascular constrictions. (5) The hypnotic state should not be considered as anything by itself, but serves only to put in evidence what already exists. The hypnotic manipulation, of whatever kind (sensory stimulation, suggestion, etc.) has only the effect to increase the excitability of such nerve centers that are, as it were, the *locus minoris resistentive*, and detach or functionally cut off certain nerve elements from the complex that forms the organic substratum of the healthy mind. In our case the cortical motor elements, morbidly excitable, were, through the hypnosis, separated from the rest.

SURGERY.

PARTIAL NEPHRECTOMY AND REUNION OF RENAL PARENCHYMA.

Tuffier (*Archiv. Gènèr. de Mèd.*, July, 1891). Renal cysts are frequently mistaken for ovarian cystoma. Of these, the unilocular are benign in opposition to the multilocular ones. In the former the renal parenchyma is sufficiently extensive as to leave no doubt as to the desirability of preserving the organ as functionally useful. Complete nephrectomy, it has been heretofore held, offers a better chance of recovery in these cases of renal cysts than incision. The discouraging results in this operation, however, led the author to institute a series of experimental studies (Gaz. Hebd., 1888, 1890, *Archiv. Génèr de Mèd.*, 1891), which developed the fact that hæmorrhage from the renal parenchyma may be controlled by compression of the vessels of the hilum and suture of the renal tissue. Such renal wounds heal readily and fistulæ are only observed to occur in cases in which the ureter has been injured. He therefore proposes to carefully dissect only the renal cyst, and to

suture carefully the walls of the cavity in the substance of the kidney. This procedure was carried out successfully in a case communicated by T. After enucleation of the cyst the renal tissue was sutured by deep catgut sutures, the capsule being sutured separately, hæmorrhage ceasing as soon as this was accomplished; no drainage was employed. The wound healed kindly. In this case an epithelioma of the bladder was subsequently removed by suprapubic cystotomy. The subsequent fate of the patient is not recorded.

EUROPHEN IN SURGICAL DRESSINGS.

The respective advantages of dry and moist dressings have received much attention of late. A point was made concerning dry dressings which did much to decide operations in their favor. We refer to the quality possessed by some of them of adhering closely to exposed surfaces thus making an impervious, antiseptic covering, beneath which the reparative processes may uninterruptedly take place. This adhering property is observed in a marked degree in europhen, which has attained a high reputation as a cicatrisant. Europhen, too, is a bulky powder which may be spread to advantage over large denuded surfaces in cases in which it would be dangerous to employ iodoform. The antiseptic and stimulating properties to europhen have, no doubt contributed greatly to its success, for its cresolic component promptly shows a characterisfic action. The iodine contained in europhen goes off slowly, thus preventing the toxic action so often recognized in preparations of iodoform, and making frequent dressing necessary, while its solubility in the liquified products of inflammation add to its effectiveness as well as its safety. In the lesions of syphilis, in ulcerated surfaces, burns and all traumatisms, this new dressing has done admirable work. Europhen has undoubted advantage over iodoform in being free from disagreeable odor or toxic influences.

IMPROVEMENTS IN THE ELECTRO-ENDOSCOPE.

Dr. Oberländer (*Archiv für Derm. und Syph.*, 1892, III. Heft.) gives an account of some improvements which have been devised as a result of suggestions furnished by a more or less constant use of the endoscopes of Nitze and Leiter.

The most important improvement seems to be a substantial enlargement in the caliber of the tubes used. Formely only instruments with a caliber of 22 to 24 F. was employed. It was found, however, that in a large proportion of the cases examined tubes of 28 to 30, and even 32 F., could be introduced. As these yielded a much larger field of vision and better illumination, their use was found to be of great clinical value.

The advantages to be derived from practicing internal urethrotomy, under guidance of the eye, by means of improved endoscopic instruments, are spoken of and the apparatus described and illustrated. (This procedure was, however, first described and practiced by Dr. F. Tilden Brown, of this city, who demonstrated its practicability and exhibited his instruments before the Genito-Urinary Section of the N. Y. Academy of Medicine, some six months before the publication of this paper.)

The writer is of the opinion much may be expected from the employment of electrolysis and the direct application of the galvano-cautery, in stricture and hypertrophic disease of the urethra: and his appliances for carrying out these suggestions are also described among the more recent improvements. Considerable advantage has been gained in deep urethral endoscopy by the employment of the hinged-obturator which enables the observer to introduce the straight tube to the membraneous urethra without pain or difficulty.

OBSTETRICS.

COMPLETE RUPTURE OF UTERUS.

Winter (*Centralbl. f. Gynäk.*, No. 1, 1892) exhibited a uterus before the Berlin Obstetrical Society not long ago. A rent passed obliquely through the anterior walls, and reached from the contracting ring nearly to the os externum. The serous coat was divided as far as the level of its firm attachment to the muscular tissues, so that there was communication with the peritoneal cavity through a rent nearly 4 inches long. At the necropsy, the uterus was found strongly anteflexed,

and the intestines and parieties had already (within 28 hours) adhered around the rent so as to cut it off from the peritoneal cavity. The patient was a 3-para, aged 29 ; one labor was normal, one required forceps. The third was at term, and began naturally. In ten hours the water broke and the pains ceased. About nine hours later, rupture of the uterus occurred, the head slowly receded from the pelvis, and a trifling amount of flooding took place. The patient was sent into a lying-in hospital. Winter found that the child had entirely escaped into the abdominal cavity, and lay in the first position, close under the parietes. The temperature was normal, the pulse 124; there was evidence of peritonitis, but not of severe hæmorrhage. The indication was, he thought, to deliver at once, rather than to take steps to check hæmorrhage. He did not deem it advisable to attempt to deliver through the rent and out of the vagina, as the fœtus lay far from the uterus, and the rent, if enlarged, would be the source of fresh hæmorrhage. He made a short incision through the abdominal walls, and drew out the fœtus and placenta within ten minutes. There was but little collapse; the symptoms of peritonitis subsided for awhile after the operation, but soon reappeared, and the patient died in twenty-eight hours. Nevertheless, Winter holds that the simple operation which he performed was preferable, in cases where little hæmorrhage or fear of hæmorrhage existed, to the long, difficult, and complicated suturing of the uterus in abdominal section. The following table gives the results of thirty-seven cases of rupture of the uterus, with complete escape of the child into the peritoneal cavity:

Treatment.	Number.	Deaths.
Died undelivered	5	5
Delivered through the rupture	8	5
Abdominal section after delivery through the rupture	1	1
Abdominal section, and delivery through incision; no suturing of uterus	12	4
Abdominal section and delivery through incision; suture of uterus.	7	5
Porro's operation	4	4
Total	37	24

Thus delivery through a simple incision in the abdominal walls gives a percentage of 66 for recoveries.—*British Medical Journal.*

GYNECOLOGY.

DIABETES AND THE FUNCTIONS OF THE FEMALE ORGANS.

Strojinowski (*Nouv. Arch. d' Obstet. et de Gynêc.*, March, 1892, Supplement.) on the basis of eleven cases under his own observation, states that diabetes not only causes suppression of the catamenia, but also distinct atrophy of the uterus and ovaries.

CIMICIFUGA IN THE TREATMENT OF DYSMENORRHŒA AND OVARIAN IRRITATION.

Following the example of Boddie, of Edinburgh, Dr. James Brunton has employed blacksnake-root in the treatment of dysmenorrhœa and ovarian irritation. He employed 30-minim doses of the tincture thrice a day, and was able to dissipate the occipital headache and ovarian pains from which his patient suffered. In cases of dysmenorrhœa, similar doses every four hours produced great benefit.

Brunton believes that the drug is an anodyne, which is valuable as a substitute for the bromide sand opiates in dysmenorrhagic pain.

When given for dysmenorrhœa, it should be given four days before, and continued over the period.

In metrorrhagia, and menorrhagia, he believes it is a regulating agent, although it is sometimes disappointing in its action. —*Practitioner*, April, 1892.

HYSTEROPEXY.

Chaput (*Annales de Gynëc. etd' Obstët.*, April, 1892) discusses the treatment of uterine retroflexions. In simple retroflexion where the uterus is freely movable, the pessary is sufficient, though the curette may be needed; but in more advanced reflexions where the pessary cannot be used, abdominal section is needed. This proceeding is preferable to vaginal hysteropexy, as it allows the operator to choose between simple replacement of the uterus, removal of the appendages with or without fixation of the uterus (abdominal hysteropexy), and fixation without castration. As fixation of the uterus itself is not in all respects advisable, Chaput recommends that the pedicles of the amputated appendages be fixed to the abdominal wound, or that the round ligaments be shortened, if re-

moval of the appendages be inadvisable. In the discussion on this communication, P. Petit advocated Alexander's operation. He said that it had fallen into discredit owing to the many indications for thorough treatment of complications in each case. It sometimes proved necessary, he declared, to perform, at the same sitting, curettage, plastic amputation of the cervix, anterior colporrhaphy, colpoperineorrhaphy, and shortening of the round ligaments. Chaput objected that it was impossible to diagnose all the complications which interfered with the success and value of Alexander's operation without an abdominal exploration, which at once altered all the conditions associated with that operation. Petit did not think highly of hysteropexy. In one case, performed by a good operator, the pains from which the patient had suffered continued, and a bad ventral hernia developed. In another the patient was sick on recovering from chloroform, and the vomiting caused the threads to cut their way through the uterine tissue into which they had been passed. The patient died of hæmorrhage.—*Brit. Med Jour.*

ENDOTHELIOMA OF THE OVARY.

Rosthorn (*Archiv für Gynäkologie*, Band xli., Heft 3) describes and figures the appearances observed in microscopical sections of so-called endothelioma, which he regards as a true neoplasm, favoring the term "sarcoma perivasculaire" applied to it by Ackermann. He thinks that capillary stasis is doubtless an ætiological factor in its development. Several forms of endothelioma may be distinguished according to their mode of origin and the prevailing histological structure.

PEDIATRICS.

ACUTE CHOREA, WITH FATAL ENDOCARDITIS.

Stahl, (*Annals of Gynæc. and Pædiatry*, Phila., 1891, v., 183.) gives the following case:

C. M., female, aged six. Family history free from any neurotic tendency, or other discoverable predisposition to disease. For a week or ten days before seeking medical advice, she had complained of her legs and feet being asleep, the "numb feelings" seemed to be confined to the lower extremities and not referred to the articulations.

On May 19, 1891, she was pale, had moderate fever (101°), pulse 130, small and somewhat irregular in rhythm, tongue coated, stomach irritable, frequent vomiting, bowels constipated, some cough. There were small moist râles over both lungs with no impairment of resonance. There was presystolic and systolic mitral murmur, without increase in cardiac area. There was considerable dyspnœa. Three days later there developed a mild chorea, most marked on the right side. It reached its greatest severity and rapidly subsided. The dyspnœa, meanwhile, increased and the pain about the heart became more severe. By the twelfth day the choreic movements were no longer present, the dyspnœa now amounted to orthopnœa, the murmur had not changed in character, there was puffiness about the extremities, and the lungs were more congested. The child died the twentieth day from my first visit of heart failure due to dilatation. No autopsy allowed.

INFANTILE MELANOSIS.

A rare case of melanosis of the lower jaw in an infant is recorded in the current number of the *Annals of Surgery* by Charles A. Power, of New York. The child was three months old when it came under observation. The swelling was about the middle of the left side of the gum of the lower jaw, and in size about that of a small almond, oval, of moderately firm consistency and covered by mucous membrane which was apparently normal. An exploratory incision was made which yielded no pus. At the end of a month; when the child was again brought to the hospital, the swelling had much increased in size. It projected well beyond the middle line of the mouth, pushing the tongue far to the opposite side. It was dense, and firmly attached to the body of the jaw, which, when felt externally, was much enlarged and resistant. Ultimately the left half of the jaw was removed under chloroform. The ordinary incision along the lower border of the bone was used, the body divided a little to the right of the symphysis, and the condyle dissected from the glenoid cavity. The operation occupied a little over an hour. The patient took the anæsthetic badly, failed to rally,

and died two hours after being returned to the ward. On microscopic examination the tumor proved to be a true melanotic growth, springing from the periosteum of the lower jaw. The author adds that the patient would have had a better chance of life had time been taken up in operating. But in so young a subject such a procedure as was carried out would in any case have proved one of a very formidable nature.

SULPHUR IN THE TREATMENT OF CHLOROSIS.

Prof. Hugo Schulz (*Med. Neuigkeiten*, No. 17, 1892) recommends sulphur in cases of pure chlorosis where iron has no action. In such cases the general condition is much improved by the administration of sulphur. After this drug has been given for a time the use of iron may be begun and successfully carried out. On the contrary, it is not well borne in catarrhal and inflammatory states of gastro-intestinal tract. The form of administration is:

℞ Flowers of sulphur.....5 ijss.
Milk, sugar.....5 xxv.
Sufficient for ten powders. A knife-pointful three times a day.

HYGIENE.

STOP SPITTING.

Says Dr. T. M. Prudden:—"If the vile and increasing practice of well-nigh indiscriminate spitting goes unchecked in nearly all assembling places and public conveyances; if the misguided women who trail their skirts through the unspeakable and infectious filth of the street are to be admitted uncleanzed into houses and churches aud theatres; if theatres and court-rooms and school-houses and cars are to remain the filthy lurking-places of contagia which their ill ventilation and their mostly ignorant and careless so-called cleaning necessarily entail; if in sleeping-cars and hotel bedrooms the well are to follow consumptives in their occupancy without warning, or even the poor show of official disinfection; if in ill-ventilated and ill-cared for dwellings the well must breathe again and again the dust borne seeds of tuberculosis; if no persistent warning is to be given to the ignorant of the dangers which lurk in uncleanliness—then our task will be most complex as well as difficult in limiting the contagiousness of tuberculosis."

Of course cleanliness and plenty of water are necessary, but, after all, it is the expectoration which carries the germ and promotes the spread of disease. Spitting, it seems, is not only a vile, but an increasing habit. This is an unfortunate social fact which reformers do not seem to have grasped, despite its noxiousness. Shall we not have to have Society for the Prevention of Expectoration—except into sanitary spit-cups? If one could stop the spitting habit, prevent the spread of consumption, and finally stamp it out, he would be greater than a tariff reformer.—*Medical Record.*

EFFECTS OF ANTISEPTICS ON VIRILITY.

Attention is called by Dr. Van Den Corput (*Rev. Therap.*) to the diminution of virile power which he has observed in patients to whom he had prescribed antiseptics, such as salicylic acid, quinine, menthol, carbolic acid. The author supposes that these antiseptics act on the blood elements, and on the seminal cells as on inferior organisms. The spermatozoids become in effect completely immobile under the microscope, like all the leucocytes, which lose their amœboid movements, and can no longer effect their migrations. Salicylic acid acts in the same manner upon the ovary, and causes the lengthening of the menstrual period.

AVINE TUBERCLE VERSUS HUMAN TUBERCLE.

Some further experiments are recorded by Mr. Charles Richet on the protection afforded against tuberculosis by inoculation with cultivations of the bird tubercle. This micro-organism, though closely allied to the normal microbe, differs from it in several important respects. Thirty dogs, all in robust health, were taken, nine of which were thus inoculated without giving rise to any local or constitutional manifestations. All the animals were then inoculated with a cubic centimetre of cultivation of the active human tubercle bacillus. Within a month from the date of inoculation every non-vaccinated animal had succumbed to the disease, while the nine dogs previously treated to a dose of the bird tubercle remained in good health. So far as they go those observations possess very great interest, but it is

hardly necessary to point out that it would be premature to conclude that we are yet in possession of the means of protecting human beings againt this terrible malady. It is a far cry from the laboratory to the sick-bed, and it is notoriously unsafe to apply the results obtained in the treatment of maladies experimentally induced to maladies occurring as part of a constitutional condition.—*Med. Press.*

MEDICAL CHEMISTRY.

A NEW REAGENT FOR ALBUMIN.

A. Jaworowski proposes a new reagent for albumin which detects the presence of $\frac{1}{3000000}$ part of albumin. (The other known reagents, as, for instance, Bodecker's, Millon's, acetic acid, and others do not detect even the $\frac{1}{600000}$ part.) The reagent is prepared after the following formula: One part of molybdenate of ammonium is heated with 40 parts of water, and afterwards mixed with 5 parts of tartaric acid, when, if the liquid is not clear, it must be filtered. For examination, the urine must be transparent and acid; if it is necessary to acidify it, tartaric acid is used. For the complete removal of albumin from the urine, add a few drops of the reagent and filter it; after filtration, add the reagent again, and so on till a precipitate ceases to be thrown down. Too much reagent must not be used at once, because the excess may redissolve the albumin. By this reagent, also, a very small quantity of mucus may be detected.—*Wiadomosci Farmaceutyczne*, November 1, 1891.

A RESEARCH ON THE POISONOUS NATURE OF MOULDY RICE.

Dr. J. Sakaki, in tho *Sei i-kwai Medical Journal*, reports the results of his study upon the action of mouldy rice. The research is particularly interesting because it has been thought by students of the disease known as *kakke* that mouldy rice was the cause. From the experiments which Sakaki has made upon frogs and rabbits, it would appear that the poison is capable of producing, in the case of the rabbit, dyspnœa, rapid pulse, pupillary dilatation, and paralysis, the animal dying in convulsions in from three hours to forty-five minutes. In the frog it caused paralysis of the forelegs and loss of reflex activity. Finally the batrachian was unable to recover its former position when placed on its back. Respiration became feeble and only very severe stimulus elicited any response.

THE FLUORESCENCE OF QUININE CONCEALED BY PHENACETIN.

From medico-legal investigations conducted by F. Sestini and R. Campani (*L' Orosi and Chem. News*), they have arrived at the following conclusions: The presence phenacetin conceals the fluorescence of sulphuric acid solutions of the cinchona alkaloids, especially when dilute. Aqueous solutions of phenacetin are colored yellow on the addition of chlorine water and ammonia, but mixtures of quinine and phenacetin are colored light-blue (methylene blue).

NEWS AND MISCELLANY.

PARADOXICAL.

The *Scientific American* says that there is much truth in the remark of one who observed, "The worst thing about the grip is that you are sick with it so long after you get well."

THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

Will hold its Eighteenth Annual Session at Cincinnati, Wednesday, Thursday, and Friday, Oct. 12th. 13th and 14th, 1892. An excellent program, containing the best names in the valley and covering the entire field of medicine, will be presented. An address on Surgery will be delivered by Dr. Hunter McGuire, of Richmond, Va., President of the American Medical Association. An address on Medicine will be made by Dr. Hobart Amory Hare, Professor of Therapeutics and Clinical Medicine, Jefferson Medical College, Philadelphia. The social as well as the scientific part of the meeting will be of the highest order.

The Mississippi Valley Medical Association possesses one great advantage over similar bodies, in that its organic law is such that nothing can be discussed during the sessions save and except science. All ethical matters are referred, together with all extraordinary business, to appropriate committees—their decisions are final and

are accepted without discussion. The constitution and by-laws are comprehensive and at the same time simple. Precious time is not allowed the demagogue or the medical legislator. The officers of the Pan-American Medical Congress will hold a conference at the same time and place.

GALEN'S HYMN TO THE CREATOR.

In my opinion, true religion consists not so much in costly sacrifices and fragrant perfumes offered upon his altars, as in a thorough conviction impressed upon our own minds, and an endeavor to produce a similar impression upon the minds of others, of his unerring wisdom, his resistless power, and his all diffusive goodness. For his having arranged everything in that order and disposition which are best calculated to distribute his favors to all his works is a manifest proof of his goodness which calls loudly for our hymns and praises. His having found the means necessary for the establishment and preservation of this beautiful order and disposition is as incontestable a proof of his wisdom as his having done whatever he pleased is of his omnipotence.—*Pettigrew's Medical Biographies.*

DEATH OF PROF. MEYNERT.

The Vienna school has lost another of its most ardent workers this week in the death of Prof. Meynert. Rumor has been for several months past active in publishing different vague accounts of the professor's state of health, but few had any notion of the end being so near. Psychiatry had been his life study, and his memory will long be preserved in that department in connection with his labors in the anatomy and physiology of the brain. Every ramification of the University has passed a tribute in his memory.

Hofrath Nothnagle, before closing his Klinikischen Vorlesung, said that science as well as their own *alma mater* had suffered a severe loss in Meynart. The mention of the name instantly brought the whole class on their feet. It is surprising to a foreign eye the devout adoration and demonstrative formality a calamity like this excites! While all stood Nothnagel continued his eulogistic elegy on the immortal works of Prof. Meynert, who had built up a branch of knowledge unknown to mankind before his labors began. Psychiatry before his time was a name without a meaniug—a chaos with no hope of order being restored. About the end of last century and the beginning of the present the clinical symptomatology was scanty and ill-defined. It is true we owe the fundamental origin of psychiatry to Griesinger, but Meynert was the spirit that gave the department a new impetus, He said to the students, "your text-books on the anatomy and physiology of the brain to-day are very different to those when Meynert commenced his labors. His was a poetic conception, not a mere descriptive brain anatomist; he was a profound thinker that obtained results not in the usual manner step after step, but rather as Müller's description of the poets,

> 'Where confusion is greatest,
> Order seems nearest.'"

Meynert was a great admirer of Shakespeare, and poetry in general, which he cultivated in his leisure hours.

Mental diseases he divided into three large groups—1st, the old symptomatico-clinic group; 2nd, the anatomical; 3rd, the physiological-experimental.

Prof. Kahlar opened his lecture with the subject which he termed a "catastrophe," that one of the brightest luminaries of the University had set for ever. His efforts were towards elucidating the nerve centre in two directions—1st, In tracing the nerve fibres to their origin, and may be termed his anatomic labor. 2nd. His method of sectional series, or localization of the brain. To Meynart alone is due the credit of laying the foundation of this important section of modern knowledge.

Prof. Zuckerkandl said Meynert had opened a new epoch in the history of medicine, as to him is due the precise expression of symptoms for localization. His writings are numerous and varied, but his anatomy of the brain is sufficient to immortalize his name.

Profs. Krafft-Ebing, Toldt, Exner, etc., gave similiar testimony of Meynert's worth. Exner said that Meynert had been accustomed for some time past to liken the brain to a large globular projection draped with a mantle of grey matter which reflected the outer world as a brilliant mirror, this mantle was populated with images and sensitive beings.—*Med Press.*

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THE
MEDICAL AND SURGICAL REPORTER.

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Clinical Lectures.

SURGERY OF THE GALL-PASSAGES AND LIVER.*

By. DR. W. KÖRTE,
BERLIN, GERMANY.

The surgical treatment of diseases of the gall-passages and liver has been given a great impetus during the last decade, and has developed into a most successful and promising branch of operative surgery. The therapeutics advocated in the various affections of these parts are by no means uniform, but even to-day are subjects of discussion and controversy. It would appear to me, therefore, that an unbiased description of the results obtained in the treatment of a series of diseases of the liver and gall-passages would be of value to the profession.

These cases are divided into the following groups:—

1. Diseases of the gall-passages.
2. Abscess of the liver.
3. Subphrenic abscess.
4. Echinococci of the liver.
5. Injuries of the liver.

1. DISEASES OF THE GALL-PASSAGES.

The most frequent cause for surgical intervention in the above is the presence of stone in the gall-bladder or ducts, and one which has been productive of excellent results in these diseases.

Gall-stones are caused by a precipitation of bilirubin, bilirubinate of lime and cholesterin upon the detritus and epithelial masses, in places where the gall becomes stagnant. This, of course, occurs most frequently in the gall-bladder. According to Naunyn, the starting point of such a concremental formation lies in a "desquamative angiocholitis." He is inclined to believe that a desquamative inflammation of micro-organisms is causative of this result. Any factor which tends to augment a stagnation of the gall, augments as well the formation of gall-stone. Among these may be principally mentioned the conventional dress of women of the present day, compressing as it does the region of the liver; or again, the compression exerted by the abdominal organs during pregnancy. These facts amply explain the more frequent occurrence of gall-stone in women than in men. A change of the chemical composition of the gall, productive of the formation of precipitates, is as yet an unproven theory for the cause of gall-stone.

Gall-stones may exist without exciting any symptoms, either untoward or otherwise, and will be only discovered at an autopsy by chance. In about one-tenth of all the bodies of adults upon which post-mortem examinations are made the concretions are found. They have been found to be five times more frequent in women than in men. Nevertheless while their presence may frequently be productive of no harm to the patient, they may occasion both severe and dangerous symptoms. In the more favorable cases they may be pressed through the gall-duct and evacuated by the bowels. But even this passage of the stone through the gall-duct occasions most agonizing pain. Those frequent gall-stone colics which are unrelieved by any internal medication Langen-

* In translating this admirable lecture by Dr. Körte, we have made no effort to abridge it, fearing thereby to mar the completeness of an article which must doubtless be looked upon as being the most exhaustive monograph on the subject in any language.

The lecture was delivered before the Free Meeting of Surgeons, in Berlin, and it appears in the German in Volkmann's Collection of Clinical Lectures. Owing to its length we are obliged to publish it in several parts.

buch considers as justifiable indications for surgical intervention. So soon as a gall-stone has attained a certain size, it can be no longer passed through the gall-duct, and then serious difficulties and dangers to the patient are likely to develop. If the opening of the ductus cysticus becomes occluded, then "retention-cysts" of the gall-bladder are developed—*hydrops cystid. felleæ*—which by means of an increasing tension and fruitless contractions of the gall-bladder are in a position to excite serious difficulties. The results are considerably worse when the stone becomes fastened in the ductus choledochus. In this event the gall is shut off from the bowels, the digestion suffers, and the stagnation of the gall in the liver causes an absorption of the biliary substances into the blood, occasioning the condition known as deletery cholæmia. By means of the pressure of the incarcerated concrements, the walls of the gall-bladder or ducts become weakened, and perforation can follow. The most fortunate termination of this process is where the stone breaks its way into the bowel, although even this is accompanied by most severe symptoms. If a perforation into the abdominal cavity occurs, the outcome is likely to be still more serious. By means of a migration of microörganisms a suppuration of the gall-bladder can occur—an empyæma—complicated with all the dangers consecutive to an intra-abdominal suppuration.

It is not the gall-stone diseases in themselves that call for surgical intervention, but rather the various conditions which the diseases give rise to, especially when internal medication has been proven fruitless or the nature of the complication (mechanical obstruction) renders its inutility obvious.

In the treatment of this disease there is no concurrence between internal medicine and surgical interference, but the latter steps in as a remedial agent only when the former has failed. Here, as in all diseases in the cure of which both great branches of the healing science may be of value, a special education of the physician is of great necessity. The surgeon who intends to operate in diseases of the gall-bladder must intimately understand the normal course of these diseases, and the physician, on the other hand, must thoroughly understand where and when his duties should be supplemented by those of the surgeon. With such mutual assistance the welfare of the patient—our *suprema lex*—is best advanced.

The indications for operative interference may be tabulated as follows:

1. Frequently recurring gall-stone colics which are unrelieved by internal medication. This indication is a relative one, and must be modified by individual circumstances.

2. The development of lasting enlargements of the gall-bladder, after such attacks of colic, is accompanied by retention of the bile. Here the existence of large concremental formations may be taken for granted, which may of course give rise to any of the dangerous complications spoken of previously. Since the supervention of these most grave complications can occur at any time and render our surgical interference too late to do any good, I therefore consider such enlargements of the gall-bladder, accompanied by retention of gall, as an indication for operation, especially among the working classes, among whom physical labor is necessary. In case, however, of the existence of retention and enlargement of the gall-bladder, unaccompanied by any colic or other symptoms, operation should be delayed. Indeed, the patients in question would, under such circumstances, scarcely be expected to submit to an operation.

3. If after severe attacks of colic the gall-bladder continues to remain tender and enlarged, the existence of an inflammatory process in and around the gall-bladder may be accepted, which in its turn points to the existence of concremental formations with a weakening of the parts. In such cases, after the futile use of internal medication, there should be an operation.

4. When the existence of fever, pain and swelling point to the existence of a suppurative process, operation should, of course, on no account be delayed.

5. Symptoms of closure of the gall-duct, should, after the failure of any internal therapy, be regarded as an indication for operation.

In the confirmation of diagnosis, and the above indications, stress should be laid upon the fact that gall-stone colics are frequently not recognized as such, but are

called by all sorts of names, but especially "cramps." This fact is called attention to by Fürbringer.*

Regarding the distinction between tumors of the gall-bladder, gall-stone diseases, and all other affections of neighboring parts, I would say that frequently hemispherically protruding and quickly growing tumors of a malign nature can be mistaken for distended gall-bladders. As an example of this I will cite a case later on (Case VII). Continued observation of the case, or exploratory incision—which I consider fully justifiable in such cases—will remove all doubt. A complication of cholelithiasis with carcinoma of the gall-bladder or liver can also occur (see Case X), Marchand having perhaps been the first to call attention to this fact. An enlarged and especially movable kidney can be mistaken for an enlarged gall-bladder. Two of my female patients came to me with the diagnosis of "floating kidney." In such cases the kidney should be held back with the fingers of the left hand, while the right hand palpates the region of the gall-bladder. This will usually suffice to clear away any doubt on such a score. The slight movement of the gall-bladder during respiration cannot be regarded as any definite mark, since frequently the kidneys also move sychronously with the respiration. Further, in such cases where the gall-bladder is considerably enlarged and adherent through inflammatory processes, this respiratory movement may be entirely absent, or else only minimal. In general, the enlarged gall-bladder will be found closer to the anterior wall of the abdomen than a renal tumor or floating kidney. Again, the latter will be more distinctly felt anteriorly if pressed forward from the back. When the colon is inflated with air it lies in front of a renal tumor. Such is, however, not the case with tumors of the gall-bladder—indeed, it would be impossible. Renal colics can, as Fürbringer† has noted, be frequently confounded with gall-stone colics, especially if only the patient's evidence is taken into consideration.

The expulsion of the gall-stones through the bowels can only be confirmed by the most careful watching of the stools. When in spite of the passage of these gall-stones, the gall-bladder still remains enlarged and painful, it may be taken for an indication that larger concrements still remain, which are of such a size as not to be able to pass through the gall-ducts.

Further, a growth in the region of the pylorus may be mistaken for an enlarged gall-bladder. Careful palpation, however, will generally reveal the fact that in cases of pyloric tumor, one is able to insert the fingers between the edge of the liver and the tumor; again, the distention of the stomach with either air or water will aid in the confirmation of the differential diagnosis. When distended the fundus of the stomach is pushed forward and the pyloric growth will change its position, or in certain cases disappear almost entirely. By these means any mistake of diagnosis in this direction may be entirely avoided.

Cysts of the liver may also be mistaken for the enlarged gall-bladder; this happened to me in a case of closure of the gall duct. The history of this patient will be given further on (Case XII). There was a round prominence somewhat larger than a walnut on the edge of the liver, and in the region of the gall-bladder. Laparotomy revealed the fact that it was a cyst of the liver. The shrunken little gall-bladder lay under he edge of the liver and could not be felt at all. In a few cases I have also found some of the liver tissue lying over an enlarged gall-bladder. This occurrence was first called attention to by Riedel.*

Right here I wish to warn most emphatically against the performance of any exploratory punctures in cases of enlargement of the gall-bladder. This can only be without danger when confirming adhesions to the abdomen. After opening the abdominal cavity, I in all cases punctured the gall-bladder, and found that even the punctures of the smallest hypodermic needle were sufficient to cause an efflux of the bile. The great danger of such punctures prior to the opening of the abdominal cavity will, therefore, at once be seen. Although pure and undecomposed gall may not have any deleterious effect upon the peritoneum, it must be remembered, as Naunyn has proved, that micro-organisms may exist in the gall-bladder, especially in empyæma of this organ. The bacteria found by

**Verhandlungen d. Kongress f. Innere Medicine,* 1891.

†*Loc. cit*

**Berlin Klin. Wochenschrift,* 1888, No. 29.

Naunyn and also by me in the gall-bladder (see Case X), and named *coli commune* excite most severe general peritonitis. This has been demonstrated by Dr. Alex. Fränkel, in the *Wiener Klin. Wochenschrift*, 1891, No. 13.

Since Bobbs, Marion Sims, and Kocher first performed the operation of opening the gall-bladder for stone, the operation has rapidly grown in favor and variously modified in its technique. It is termed cholecystotomy and may be completed at either one or two sittings. In contradiction to this procedure, Langenbuch in 1882 recommended cholecystectomy, or excision of the gall-bladder in order to prevent possible recurrence by the removal of the seat of its growth. Courvoisier, Merideth, Spencer Wells, Bernays, and Küster produced and performed the operation of so-called "ideal cholecystotomy," which consisted in an incision of the gall-bladder, with subsequent suture of the part. These constitute the three principal methods for the surgical treatment of cholelithiasis; which, however, may be subdivided according to the variations of the details of their technique. For the operative treatment of closure of the gall-duct other methods are of value.

My own experience in the operative treatment of gall-stone has been limited to twelve cases, eleven of these being women, and one man. The proportion shows the far greater frequency with which the disease is apt to occur in women. Besides these, two men came under my observation who were suffering from gall-stone, and in both cases operation was clearly indicated; both patients, however, refused operation and I lost sight of them. In the case of women, the influence of pregnancy was plainly discerned. All of them had given birth to children, and many gave evidence that the gall-stone colics appeared in connection with their lying-in period; although they frequently only recognized them as "cramps." In six cases there was a dropsy (hydrops) of the gall-bladder associated with frequent colics. Operation revealed stone in five of these cases, but no concremental formations whatever in one (Case VI). Four of the patients suffered with empyæma of the gall-bladder. In three of these cases stones were formed, but not in the fourth case (Case VIII). Finally, three of the patients suffered from occlusion of the ductus choledochus (one of these suffered also from suppuration of the gall-bladder and liver, and was operated upon twice). Of those operated upon three died—one case of occlusion of the gall-duct from gradual weakening (Case XII), another similar one from suppuration of the liver which had existed prior to operation (Case XIII), and the third death in a case of empyæma of the gall-bladder with stone, from carcinoma and suppuration of the liver, (Case IX). So far, therefore, I have had no death occur from the effects of the operation. I was able to dismiss all my patients without any biliary fistulæ and indeed, with a normally acting gall-bladder, although in some cases several operations were performed.

The operation of cholecystotomy was performed several times—once in a case of dropsy of the gall-bladder with stone, performed at one sitting, (Case I); four times in empyæma of the gall-bladder (Cases VIII to XI), at one sitting; twice in occlusion of the bile-duct as a preliminary operation in cholæmia (Cases XI and XIII), at two sittings. It will be seen, therefore, that I have performed the operation five times at one sitting, and twice at two sittings.

The last modification—the performance of the operation at two sittings—has been especially recommended by Riedel. I prefer the operation as performed at one sitting when it is possible, and would only resort to the double operation when (as in Case XII) the gall-bladder is so shrunken that it is difficult or even impossible to sew up this organ, or when its walls are quite fragile, or appear so thin, that it would seem that they could not hold the stitches. If the gall-bladder can be well reached and drawn into the wound, and if its walls are strong, I strongly favor the single operation. After puncture of the frequently tense and distended gall-bladder, in order to relieve the pressure against its walls, a hermetic closure may be effected. The line of incision should first be coated with iodoform-collodion, or covered with iodoform vaseline upon a piece of lint. After this one way safely cut the gall-bladder open and empty it of its contents. I believe that, if it is possible, without danger to the patient, we are justified in completing an operation at one sitting, it should be so performed, and secondly in certain cases (such as empyæma, possible necrosis

of the walls of the gall-bladder, and occlusion of the choledochus) a delay of several days is by no means a matter of little importance. The biliary fistula occurring in cases I and IX was closed plastically after a time, by means of loosening the walls, suture of the same, and covering the whole with the abdominal walls. In Case VIII the wound closed spontaneously, in Case XI the fistula was removed by establishing a communication between it and the intestine. Three of the patients died in consequence of the primary disease.

The secretion of gall—as is well known—does not occur continually, but periodically, and is especially copious a few hours after meals. Some patients apparently secreted no gall during the day time, while the flow was copious during the evening and night. Contrary to Naunyn's opinions, I have given Karlsbader salt (1 teaspoonful of the salt in half a pint of water) and salicylate of soda (2 to 3 grammes in water), in two cases of occlusion of the gall-duct, and in many cases of simple biliary fistula and have observed a decided increase in the secretion of the gall. I would ascribe to these remedies a decided cholagogue action.

I consider the operation of cholecystotomy the most rational procedure in empyæma of the gall-bladder, in diseases of the walls of the gall-bladder, and, further, in occlusion of the choledochus in order to establish an exit for the bile and save the patient from cholæmia.

In simple concremental formation in the gall-bladder, unaccompanied by any disease of its walls, and where the gall duct is not occluded, I prefer a simple opening of the gall-bladder, emptying its contents, and subsequent closure of the incision—the so-called "ideal cholecystotomy." This operation was performed by me in five cases (Cases II to VI).

After the opening of the abdomen over the distended gall-bladder—and for this purpose I prefer a transverse incision parallel to the ribs, rather than a longitudinal incision, since the former gives a better field of vision to the operator—the bladder and duct are carefully and directly examined by digital palpation, and any adhesions which tend to render the examination difficult, loosened. Then the gall-bladder is drawn forward as much as possible, and the abdominal cavity completely protected by sterilized or iodoform gauze, which is plentifully packed around the bladder. By means of puncture with the exploring needle, the character of the contents of the gall-bladder is determined, and if the fluid drawn up into the syringe is not putrid, and contains no pus, then the patient is inclined somewhat towards the right side, and the gall-bladder incised and emptied of its contents. The stones are usually washed out with ease, or may be removed with the "stone-spoon." Difficulties are met with if the stone is wedged in the cyst, and these are only removable after considerable effort and great pains on the part of the operator. For this purpose the blunt hook will frequently be found a valuable instrument. In one case (Case III) the stone was lightly wedged in the cyst and all efforts at removal were unavailing. Finally, I inserted my finger under the gall-bladder in the abdominal wound and executed a pressure, as though I were squeezing a cherry-pit out of the fruit. The stone was thus easily removed. It will be readily seen that in this case if the abdominal cavity had been closed by suture to the gall-bladder this procedure would have been rendered most difficult, or indeed impossible. The possibility of such an occurrence points, in my mind, to the superiority of this operation over the "ideal cholecystotomy." After the removal of the deepest stones the golden-yellow bile will appear in the bladder, showing that the communication with the liver is now free. In every case I have endeavored to sound the ductus cysticus, but the sound is always caught in the folds of the mucous membrane unless the duct has been very much distended by the presence of stones. This is easily understood since the mucous folds are in the form of a spiral. So far I have been unable to pass a sound from the ductus cysticus into the choledochus or even into the intestine. It will be seen, therefore, that by means of sounding alone we cannot prove the existence of a free passage, while palpation from the abdominal cavity is a most important aid in determining this.

A free passage through the choledochus—which should be determined before the performance of this operation—can only be proved or disproved by an examination of the fæces, or a digital examination of the choledochus.

After the removal of all concretions from the gall-bladder, the latter should be

disinfected with some solution as little poisonous as possible. For this purpose a one-half per cent. solution of lysol, or a solution of salicylic and boric acids will be found applicable. After this the gall-bladder is washed out with sterilized water, great care being taken to prevent, as far as possible, the fluid entering into the abdominal cavity. If we are convinced that the walls of the gall-bladder are intact, we can then proceed to close the opening with two rows of sutures, similar to those used in suture of the intestines. It will be found, however, that these sutures are more easily applied upon the gall-bladder than upon the intestine, since the walls of the former organ are considerably thicker than those of the latter.

The first row of sutures brings the edges of the incision together, and the second closes the peritoneum over it. Whether one should use the continuous or interrupted suture is entirely a matter of preference; personally I prefer the latter, since I consider that a more exact closure of the wound can be effected. For the suture material I have principally used silk thread, but lately have employed catgut in its place, for the reason that I have found that even when the most stringent aseptic measures have been employed the silk sutures are apt to slough out. When possible, it is well to bring the mesentery over the line of suture of the gall-bladder, and to fasten it with one or two stitches. This membrane becomes so rapidly adherent as to form an excellent protective covering. In the first few cases that I operated upon I fixed, or attached, the peritoneum to the peritoneum at the abdominal wound, for safety's sake, but later abandoned it without incurring any untoward results. In the endeavor to obviate the possible bursting of the sutures of the gall-bladder, Senger and Wölfler have practiced a fixation of the gall-bladder to the abdominal wound, opening it a few days later and emptying its contents; Wölfler would not return, or rather, resink the gall-bladder to its natural position for about nine days. The abdominal wound would be closed all but a few stitches which were left loose. In this opening a strip of iodoform gauze was inserted reaching to the suture of the gall-bladder. After the lapse of four or five days this was removed and the abdominal wound entirely closed. This precautionary measure as a guard against the possible rupture of the cystic suture, can at all events, do no harm. In my experience the gall-bladder healed very rapidly in four cases, in one a small but rapid closing fistula was formed (Case VI).

(*To be continued.*)

NEW OPERATION FOR THE RADICAL CURE OF ABDOMINAL HERNIA.

In a pamphlet (published by I. Artero, Rome, 1892), Bottini says that to attempt to close up, by itself, the passage down which the hernia has travelled, or to block up the external orifice by itself, is a delusion; the resulting resistance is far too weak to withstand abdominal pressure. It is the internal orifice, and this alone, which should be closed (by sutures). This is done by bringing together its margins, without disturbing the anatomical relations of adjoining structures, whether the hernia be oblique or direct. The sac is a secondary matter; it may be excised—all or part—or left, according to circumstances. Whether the hernia be free, incarcerated, or strangulated makes no difference; the methodical closure of the internal opening is the only thing aimed at. The hernia is thoroughly opened up along its length, the aponeurosis of the external oblique, and the fibres of the internal oblique are reflected on a director, and the sac is laid bare, and very carefully and thoroughly isolated. Then the bowel is returned, the sac being incised or not according to circumstances; in congenital herniæ, incision is best avoided. Two Hagedorn's needles armed with catgut are passed, the first from within outwards, embracing not only the free margins of the internal oblique and transversalis, but the aponeurosis of the external oblique; the lower suture passes well into the thickness of Poupart's ligament. Then the needles are withdrawn, and a finger is introduced into the orifice to control the tightness of the threads which are now drawn up. The patient is directed to cough, and if any bulging be felt, a third suture may be inserted; this however, is seldom necessary. After a fortnight, the patient is perfectly cured, no truss or bandage being afterward required. Nine femoral, twenty-one inguinal, and one umbilical herniæ were thus operated on, all with perfect success. —*Brit. Med. Jour.*

PREPARING THE FIELD OF OPERATION; CIRCUMCISION; INTESTINAL OBSTRUCTION; APPENDICITIS.

By DR. R. H. M. DAWBARN,
NEW YORK POLYCLINIC.

Gentlemen:—This patient was presented to you at the last clinic, and you remember a small fatty tumor was removed from the back. The result has not been so good as was expected, for there has been some suppuration, an occurrence which is by no means common here, but still is occasionally met with at our clinics, probably from the necessarily hasty methods adopted for cleansing the field of operation. An investigation carried on at the Johns Hopkins University has shown that the plan of disinfecting the skin at least twenty-four hours before the operation is an eminently wise one, as the microbes lodge in the hair follicles and in the deeper layers of the skin, and are therefore not removed by the ordinary washing just prior to operating. The best results are obtained where the parts are first thoroughly disinfected, and then covered with a wet bichloride dressing for a number of hours. The same investigator found that the usual methods of cleansing the hands failed to sterilize them, and the most approved method of effectually sterilizing the hands is the one which I would recommend you to employ in sterilizing the patient's skin, as it can be done quickly, is very efficient, and is applicable to such cases as those upon which we operate here in our clinics. The method consists in thoroughly wetting the skin with a saturated solution of permanganate of potassium in hot water. This stains the skin black, but the next step, which consists in washing with a saturated solution of oxalic acid, removes this stain, and the process is completed by simply washing off the oxalic acid. I am accustomed to carry in my satchel, crystals of permanganate of potassium and of oxalic acid, which can be readily dissolved in water when wanted. This method is convenient and cheap, and I heartily recommend it to you.

As I have been asked to fill this hour today for a colleague I shall adopt my usual custom under such circumstances, and speak on several topics which are of such practical interest and importance, that certain members of the class have requested that they be given special consideration.

CIRCUMCISION.

First, I shall say a few words about the operation of circumcision. I am a firm believer in doing this operation upon every child. Most genito-urinary surgeons will tell you that the Jews have much less venereal disease than any other race, and this cannot be because they are more virtuous, but because there is much less surface to be infected, and that surface is much less sensitive and liable to abrasion. The great majority of young men, probably ninety-five per cent., indulge in illicit intercourse before they are married, and we may as well face this fact. We hope in our minds that our sons will not belong to this great majority, but we know in our hearts that they most probably will, and hence we should do everything we can to avert the evils connected with such habits of life. The simplest way of doing a circumcision is to slit the prepuce along the dorsum, but I do not usually adopt this plan, as it is followed by great œdema which frightens the friends unnecessarily. I believe in removing all the prepuce except enough to cover the corona, and in doing this, great care must be taken that the mucous membrane be pulled down and cut along with the skin, otherwise you are likely to have the mortification of removing a circle of skin and leaving the mucous membrane intact. Having trimmed the parts nicely, a running catgut suture should be used, and the parts given a coating of iodoform collodion, and then dusted over freely with baby powder. In the adult, there is a tendency to erections, and consequent tearing out of the sutures, and to obviate this, the patient should be given for a day or two before the operation, large doses of bromide of sodium, and after the operation, the penis should be encircled in a coil of small rubber tubing through which cold water is kept running.

INTESTINAL OBSTRUCTION.

I shall next consider a few points regarding the diagnosis and treatment of intestinal obstruction—and first, as to intussusception. It does not necessarily involve the entire calibre of the intestine, and in many of these cases, which are especially frequent among children, a tumor can be felt, most commonly in the ileo-cæcal region. The books usually state that it is oblong in shape, but it is rare that the abdominal wall is thin enough or

sufficiently relaxed to enable you to distinctly map out the shape of the tumor. One well-known writer on children's diseases, says that whenever bloody movements are noticed in children under two years of age, the first thing to be thought of is intussusception, and although it does not follow that every time a child has bloody movements there is an intussusception, the frequency with which this condition is overlooked, justifies the warning which this writer gives. Volvulus, on the other hand, is more frequent in adults than in children, and most commonly involves the region of the sigmoid flexure. It seems rather remarkable that it should be met with in grown persons more often because in children the sigmoid flexure of the colon is proportionately larger than in adults. In volvulus, the obstruction is well marked; not even wind passes it, as a rule. Of course, it is sometimes high up in the small intestine, and then the frequent passages of fæces from below this point might lead you to suppose that the obstruction was not complete.

In most cases of suspected intestinal obstruction, the first thing the average practitioner thinks of is some laxative or cathartic, and he usually begins with a mild one, and then runs through the whole gamut to more and more severe cathartics, until probably he ends by giving some croton oil. Now, aside from the fact that croton oil is a very dangerous remedy, there are other and better ones which will suffice where any cathartic is appropriate. Just think that if the croton oil happens to be retained, what an irritant action it must exert! The only laxative I would use would be some saline, such as Epsom salts, Rochelle salts, or Hunyadi water; and if these did not act as purgatives, they will be gradually absorbed through the wall of the gut, and be excreted through the kidneys, and therefore they do not possess the objectionable features of other cathartics. If such laxatives do not relieve the obstruction, I should next think of a high rectal enema, which may be given in various ways. The plan which I believe to be original with me, consists in warming a siphon of carbonic acid water, attaching a rubber tube to the outlet tube of the siphon, and introducing this rubber tube high up into the rectum. By pressing the trigger on the siphon, you can obtain the effect of both the gas and water under pressure, and this pressure can be easily regulated in the same way. After discussing this subject before the class about two years ago, one of the gentlemen came to me and related a case of severe intestinal obstruction, where after the usual injections had failed, at the suggestion of one of the physicians present, the patient was inverted, and nearly two quarts of glycerine introduced into the rectum with a fountain syringe, and the patient kept in that position for half an hour. At the end of this time, there was a remarkably copious discharge of fæces, and the obstruction was completely relieved. We know that glycerine is a very powerful exciter of peristalsis, and the method is certainly worthy of a trial before resorting to the knife. Another method which I have never tried, but which is recommended, consists in washing out the stomach; it is said to act by exciting peristalsis, and I presume it might be successful in mild cases. We now come to the question of operation. If the patient refuses operation, I would desist from the use of laxatives, and would administer opium or similar remedies, and await events, for one well-known textbook says experience has shown that a large percentage of these cases of intussusception recover. If you do not operate early, you may expect dangerous complications, for there are usually in the later stages, firm adhesions. In both volvulus and intussusception, the best treatment in my judgment is to cut out the affected portion and make an artificial anus, and a few weeks later, operate for the restoration of the continuity of the gut, preferably by intestinal anastomosis. It is a great mistake to endeavor to restore the continuity of the gut at the time of the primary operation, although this was the common practice only four or five years ago. Of course, in advocating early operation in these cases, I take it for granted that those attempting such operations are thoroughly competent to carry out the full technique of aseptic surgery. Where there is much distention of the intestine, it may be necessary to puncture coil after coil of intestine, for, strange to say, you cannot remove any large amount of gas by puncturing a single coil. It is for this reason, that I have given up Senn's hydrogen gas test for intestinal perforation. Theoretically this is a beautiful test, but ex-

perience shows that practically, the test does not always work, as the perforation is sometimes obstructed by a hard mass of fæces. In a number of instances in which this test was successful in revealing a perforation of the intestine, it was found that the inflation of the intestine with the hydrogen gas had caused so much distension, that coil after coil required to be punctured in order to facilitate the subsequent steps of the operation. Finally, in experimenting with this test on the cadaver, I had an experience which led me to abandon it altogether. I had produced several bullet wounds in the intestine, and was endeavoring to inflate the gut with hydrogen gas. I allowed the gas to pass through for sometime, according to the usual method in order to expel all air, but on applying a lighted match to one of the perforations in the intestine, there was a violent explosion which would have been extremely disastrous had the test been performed on the living subject. The explanation of this subject was simply that sufficient air had gained entrance through the perforation to form an explosive mixture with the hydrogen gas. The test, therefore, is both unsafe and unreliable.

APPENDICITIS.

I shall now say a few words about appendicitis, a term which embraces what was formerly called typhlitis and perityphlitis. Dr. Mc Burney claims that in ninety-five per cent of these so-called cases of typhlitis, or perityphlitis the trouble is primarily in the appendix. It was because operations were performed formerly at so late a stage that it is only very lately that we learned that the appendix is not an intraperitoneal viscus. We know now that it has in almost every case a distinct though short mesentery. The common idea that seeds and other foreign bodies of some kind or another are the cause of this condition is a fallacy. Prudden states that he has never found in his large experience a seed or pit, the starting point being almost invariably a fæcal concretion. Normally, the blind end of the appendix is held upward so that it can empty itself by gravity, but in almost every case examined pathologically, the blind end has been found hanging downward, thereby inviting, as you see, the retention of fæcal matter long enough to cause irritation.

As regards the symptoms, the patient has pain and tenderness, greatest at a point midway between the navel and the anterior superior spine of the ilium. This was first described by McBurney, and has been called "McBurney's point." At one time, he claimed that it was pathognomonic of this condition, but we know that this is not true. This point is supposed to be about opposite the apex of the appendix, and hence this is the mid-point of the incision. The symptoms may be briefly summarized as follows: (1) This special point of tenderness; (2) rigidity of the abdominal muscles on the affected side, as compared with those of the opposite side; (3) a drawing up of the thigh on the affected side; (4) the presence of a tumor, provided you see the case sufficiently late, or if the patient be etherized, so that the rigidity of the muscles is overcome; (5) the presence in most cases of a certain amount of fever: and (6) if the pus be present, possibly rigors. On these half dozen symptoms, you can base your diagnosis of appendicitis. The condition of the bowels has nothing to do with the diagnosis, because the trouble is in the appendix, although usually the bowels are somewhat constipated. The degree of fever is also not of much importance. The most important point is, shall we operate whenever these symptoms are present? We all know that many of these cases get well, but unfortunately a great many do not recover. Poultices and iodine accomplish nothing; morphine does harm instead of good by making the patient so comfortable that he will refuse an operation which might save his life. The presence of a tumor would induce me to operate in every case, because that means pus, and you cannot tell by what route it will be discharged; but if no tumor is present, I would operate whenever there is shock, as shown by cold extremities, an abnormal ratio between the pulse and respiration on the one hand, and the temperature on the other. For instance, if the temperature were 101° or lower, the pulse 120 or 130, and the respirations proportionately increased, perforation or threatened perforation is indicated in most cases. Having decided to operate, you must make preparations as for an ordinary laparotomy, as you are going to expose the intestine for several inches. It is very common to find the small intestine covering the field of opera-

tion, and much valuable time is consumed in trying to get the intestine out of the way. The following point in technique will aid you greatly at this stage. Turn the patient over so that he rests with the left side against the bed or table, and the field of operation is uppermost; then seize the edge of the gut in the abdominal opening with a retractor, and draw it forward away from the spine. This will make a cavity into which the intestines will fall out of the way, while the cæcum which has a very short mesentery cannot follow, but must remain uppermost. You next apply two ligatures and cut between them. The mucous membrane and the stump of the appendix should be scraped with a spoon, and the stump disinfected by touching with a drop of pure carbolic acid. If you find adhesions blocking off this portion from the general peritoneal cavity, be most careful not to break them up. If the appendix cannot be readily reached on account of adhesions, I carefully wash out the cavity and pack it instead of breaking up the adhesions. This is very important. Drainage is established anteriorly, either by a glass or rubber tube, with gauze both around and inside of the tube. Only the extremities of the incision are closed, the packing being brought out through the middle portion. The packing is frequently changed, the frequency depending upon the temperature and the amount of the discharge. When suppuration is ended, freshen up the edges of the wound, and unite them by sutures, carefully including the muscles, in order to avoid the liability to hernia. When the accumulation of pus is posterior, make a small opening upon the dressing forceps, close to the ilium posteriorly, enlarge this with the forceps, and draw the drainage tube in from behind, and completely close the anterior wound. This is an excellent method of drainage, because the drainage is assisted by gravity, and the tendency to hernia is avoided.

SPIRITUS OPHTHALMICUS.

This is said to be a remedy of great value in chronic conjunctivitis. The old English writers on ophthalmology used it extensively:

℞ Spiritus camphor.
Spiritus vini gallici.....āā ʒi.
Spiritus lavender.
Spiritus rosemary.....āā ʒij.
M. Sig —Eye spirits, to be used only externally over the closed eyelids.

Communications.

THE SHURLY-GIBBES TREATMENT OF TUBERCULOSIS.*

By E. FLETCHER INGALLS, A. M., M. D.,
CHICAGO, ILL.

The iodine and gold and sodium bichloride treatment of tuberculosis, more commonly known as the Shurly-Gibbes treatment, originated with Drs. E. L. Shurly, of Detroit, and Heneage Gibbes, of Ann Arbor, in the fall of 1890, and was the outcome of numerous experiments which they have made on animals.

Owing to the furor created by the announcement that Koch had discovered a remedy for tuberculosis, some enterprising newspaper men who had heard of Dr. Shurly's experiments, succeeded in obtaining from the report of the Medical Society of Detroit and from the Harper Hospital certain facts with reference to his researches; these facts when amplified and illuminated by the brilliant imaginations of the reporters, made many columns in the daily press, which were sent out to all parts of the country. The craze over Koch's tuberculin kept alive the interest in Shurly's treatment and caused numerous physicians in various parts of the country to give it a trial.

In the early part of January, 1891, I visited Detroit to investigate Dr. Shurly's method and was so favorably impressed by the result of his experiments upon animals and the apparent improvement of a number of patients who had been treated upon the same principle, that I returned home and at once began the use of these remedies, with nearly all of my phthisical patients. Since that time I have treated in private practice over two hundred cases of pulmonary phthisis, many of whom have received this treatment. Not wishing to subject these patients to the chance of experiment, I carried out the treatment thoroughly but only as an adjunct to other measures, which seemed to me suitable. Indeed during all my subsequent use of this form of medication, it has been so associated, and therefore the results of

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treatment cannot be ascribed wholly to the iodine or gold and sodium bichloride; however, the outcome of these cases has appeared so much more favorable than those treated by other methods alone that they seem to me worthy of record and sufficient to give a fair basis for estimating the true value of this method.

In the beginning I recommended the treatment for nearly all patients, but after a short time I became convinced that it was of no great value in advanced cases, and ceased to employ it excepting in cases which had not progressed beyond the second stage of the disease; as a rule, I have not since recommended it in cases where the disease has extended beyond the upper lobe of one lung, even though cavities had not yet formed. A considerable number of these patients I have seen but a few times, some not more than once, and in many instances only a few hypodermic injections have been employed; therefore only comparatively few of the two hundred cases can properly be considered in studying the effects of the treatment.

As nearly all patients suffering from phthisis consider themselves better and often appear better for the first two or three weeks under any new treatment or that recommend by any new physician, I have excluded from my list for analysis all cases except those in whom the treatment was continuously employed for more than five weeks. Of these I find very complete records of forty-three, an analysis of which will, I believe, enable us to form a fair estimate of the influence of the treatment upon the progress of tuberculosis. Although the effect of other remedies can not be excluded, I feel safe in the assertion that many of these patients have done much better than former experience would have led me to expect; and I believe these results are largely due to the tonic and alterative effects of the iodine and gold and sodium bichloride. I am confident that none have been injured by the remedies. In the following list I have presented all cases of pulmonary phthisis treated in this manner for a period of five weeks or more without regard to the origin, stage, course or result of the disease. Of the forty-two cases which I shall report many received no benefit; several were apparently benefited for a short time in a way that could hardly be accounted for by mental impressions; quite a large percentage were much improved for several months, and in eighteen per cent. the disease appears to have been arrested. I have classified as arrested all those cases in which the progress of the disease in the lungs has been checked for several months, in which the general health continues good, and the cough and other symptoms have nearly or quite disappeared. I think it probable in all such instances careful physical examination would still reveal evidences of consolidation, though to much less extent than when the treatment was commenced.

In some of this list of cases the diagnonis has been based upon the symptoms and physical signs only, there having been no microscopic examination of the sputum, and a few have been diagnosticated as tubercular, even though microscopic examination failed to detect tubercle bacilli. In some of the cases, classified as arrested, the bacilli may still be found when purulent sputum can be obtained; in others it has been impossible to obtain sufficient sputum for examination, and in still others the bacilli cannot be found. The treatment has not appeared to me to destroy or change the appearance of these germs.

In order that each may judge for himself of the probable value of this treatment, I have given concise histories of these cases that I will not read, but which may be examined at your leisure. I have not classed any cases as cured, believing that in a disease like pulmonary tuberculosis, no patient can properly be counted cured, who has not been free from all symptoms and signs of the disease for at least two years.

REPORT OF CASES.

Case 1.—Not benefited. July 8, 1891. Miss F. B. C., aged 21, ill five months. No hereditary predisposition. Symptoms,—soreness in the chest, night sweats, cough, expectoration, and dyspnœa. Usual weight–107 lbs., reduced to 93 lbs.; anæmic, strength fair, never had hæmoptysis, pulse 120, temperature 100° F. Signs,—left lung, in front: dullness from apex, descending as low as second interspace, with numerous mucus and subscerpitant râles extending from apex to base of lung. Posteriorly, similar râles and dullness extending three inches below spine of scapula. Right lung and heart normal. Numerous tubercle bacilli in sputum.

This patient was treated eight weeks and received 24 injections, when it was deemed best for her to go to Colorado. The treatment was continued there for a time, but she died at the end of eight months.

Case 2.—Not benefited. April 24, 1891. Mr. M. H. W., aged 29. No hereditary predisposition. Patient had been ill one year, the disease having begun with pneumonia. Symptoms,—cough and muco-purulent expectoration, amounting to about four ounces daily, weight reduced from 165 to 155 lbs., has had several hæoptyses; strength, appetite and digestion fair; pulse rapid, frequent fever. Signs,—left lung: feeble respiration over the entire lung with marked dullness, subcrepitant râles and exaggerated voice sounds. A large number of tubercle bacilli in sputum. Treated six weeks, received 17 injections. Patient disappeared.

Case 3.—Not benefited. November 30, 1890. Mr. S. J., aged 25, no hereditary predisposition, had pleurisy with effusion three years previously, and at the time I first saw him he had been sick four months. Symptoms,—pain in the chest, failing strength, dyspnœa on exertion, and cough and expectoration; weight reduced from 150 to 140 lbs., appetite fair, pulse 104, temperature 101.5° F. Signs,—left side, slight loss of motion and dullness and subcrepitant râles over greater part of anterior portion of lung; posteriorly similar signs, extending as low as the inferior angle of the scapula. Sputum not examined. About four months after the patient came under my observation, he was placed upon the iodine and gold and sodium bichloride treatment, which was continued for six weeks, but he received no decided benefit.

Case 4.—Not benefited. September 15, 1891. Mrs. H. H., aged 30, no hereditary predisposition, ill eighteen months. Symptoms,—pain in chest, loss of weight and strength, dyspnœa, cough and expectoration; hæmoptysis ten days previously. Pulse 144, temperature 101¾° F. Signs,—larynx and trachea congested; right apex dullness low as second rib; left apex dullness low as third interspace. Subcrepitant râles below left clavicle, numerous tubercle bacilli in sputum. Patient under treatment thirteen weeks; she received fifteen injections and apparently improved for a short time, but obtained no lasting benefit.

Case 5.—Not benefited, September 18, 1890. Mr. J. H. M., aged 29, no hereditary predisposition; had suffered an attack of pneumonia seven years previously, and had been a hard drinker for some years. Had been ill one year. Symptoms—pain in the chest, loss of weight and strength, cough and expectoration; pulse 130, temperature 100⅘° F. Signs—dullness, subcrepitant and mucous râles over the lower half of left lung. About three months later the patient was placed under the Shurly-Gibbes treatment, which was continued for five weeks; during this time he received twenty-three injections. Patient went to Texas, but finally returned and died a few months later.

Case 6.—Not benefited. March 12, 1891. Miss S. P., aged 27, no hereditary predisposition. Patient had suffered from bronchitis and influenza and began coughing two years previously. Symptoms—weak, lost 15 lbs in weight, strength fair, frequent cough with expectoration of a greenish sputum; two hæmoptyses, appetite poor, pulse 96, temperature 99⅘° F. Signs—left apex consolidation, which had progressed to the third stage; right apex consolidation beginning. She was under treatment six weeks; received eleven injections.

Case 7.—Not benefited. April 30, 1891. Mr. S. J. W., aged about 50, lost three sisters with consumption, had himself suffered from pneumonia four months previously, had been sick for four months. Symptoms—pain in right lung, loss of weight 19 lbs, great loss of strength, night sweats, cough and expectoration of viscid yellow sputum, about two ounces daily, no hæmoptysis, appetite was very poor, pulse 120, temperature 100° F. Signs—entire right lung involved, especially the upper two-thirds, left lung normal, numerous bacilli in sputum. Patient was under observation seven months and a half and received from ten to fifteen injections; he subsequently died.

Case 8.—Not benefited. January 3, 1891. Mrs. M. W., aged 28; ill eighteen months; one sister had died of phthisis; patient herself had pneumonia eighteen months previously. Symptoms—pain in left side, lost in weight 33 lbs., dyspnœa, cough, muco-purulent expectoration of about three ounces daily, no hæmoptysis, anorexia, pulse 112, and temperature 100° F. Signs marked. Sputum not ex-

amined. She was under treatment six weeks, and died about nine weeks after her first visit.

Case 9.—Not benefited. January 7, 1891. Mr. B. P,, aged 21; lost two brothers from phthisis; no previous pulmonary disease; ill four months. Symptoms,—loss of flesh, dyspnœa, cough and expectoration, poor appetite, one hæmoptysis. Pulse 100, temperature 98 ⅔ ° F. Signs,—left apex involved low as fifth rib; right lung: feeble respiration over lower lobe. Sputum not examined. Was under treatment eight weeks and received thirty-one injections; died a few weeks after the last visit.

Case 10.—Not benefited. July 7, 1891. Miss Z. H., aged 27. Several uncles and aunts had died of phthisis. Patient suffered from pleurisy three years previously and from influenza about ten weeks before calling upon me. Symptoms—pain over left lung, weakness, loss of weight from 145 to 114 pounds, night sweats, cough and expectoration of from one to four drams daily; appetite fair, pulse 120, temperature 120⅘° F. Signs—dullness, feeble respiration and harsh respiratory sound over upper lobe of left lung low as fourth rib in front and to fifth rib behind. Cogwheel respiration all over left side and feeble respiratory murmur over the lower lobe. Many tubercle bacilli in sputum. She was under treatment six weeks and received 38 injections, but apparently not benefited. She then went to Colorado and was there under the same treatment for a time, but steadily failed and died after a few months.

Case 11.—Not benefited. November 12, 1891. Mr. M. H., aged 40, no hereditary predisposition, or former illness. Symptoms — weakness, diminution of weight from 174 to 157 pounds, night sweats, dyspnœa, poor appetite, cough and expectoration of from two to four drams daily of muco-pus. Pulse 112, temperature 102° F. Signs—dullness over right apex low as fourth rib, with broncho-vesicular respiration low as the third interspace in front, and extending three inches below the spine of scapula behind. Tubercle bacilli in sputum. He was under treatment six weeks, but received no apparent benefit. He then went West where he probably died.

Case 12.—Not benefited. November 5, 1891. Miss L. S., aged 24. She had suffered no previous illness, but one sister had died of phthisis. Symptoms—failing strength, loss of weight from 130 to 104 pounds, poor appetite, night sweats, irregular menstruation, cough and expectoration of from two to three ounces daily of muco-pus; pulse 120, temperature 101° F. Signs—congestion and thickening of vocal cords, slight dullness, and broncho-vesicular breathing low as rib on left side and low as the third interspace on the right. Tubercle bacilli in sputum. Was under treatment about six weeks, but received only a few injections; died about four weeks later.

Case 13.—Not benefited. June 6, 1891. Mr. B. S., aged 21, no hereditary previous pulmonary disease. Had been sick three months. Symptoms—dizziness, weakness, loss of weight from 123 to 104 pounds, dyspnœa, cough and expectoration of muco-purulent matter about one ounce daily, poor appetite. Pulse 118, temperature varying from 98° to 102° F. Signs—distinct dullness over right apex low as third interspace with a few subcrepitant râles all over the upper lobe of that lung. Slight dullness over left apex and a few subcrepitant râles as low as the second rib. Sputum not examined. Was under treatment about five weeks, but grew gradually worse and died about six months after he first came under my notice.

Case 14.—Not benefited. January 28, 1891. Mr. H. D., aged 24, no hereditary predisposition or previous disease. Had been sick about three months. Symptoms—pain in right side, cough, nervousness, anorexia, emaciation, night sweats and fever. Pulse 106, temperature 101⅕° F. Voice very hoarse, dyspnœa, cough and expectoration of about three ounces of mucus daily. There had been no hæmoptysis. Signs—congestion of the larynx and trachea, with dullness over right apex low as second rib, broncho-vesicular breathing, and subcrepitant râles low as second interspace. Sputum not examined. Patient was under treatment eight weeks and received thirty-one injections, but no apparent benefit. Left for the Old Country where he probably died.

Case 15.—Slightly benefited. February 9, 1891. Mr. H. J., aged 20. Father and mother both died of consumption. Had been sick five weeks when first seen. Symptoms—pain in the shoulder and side,

headache, night sweats, weakness and loss of weight from 140 to 130 lbs., pulse 90, temperature 98⅘° at times, but frequently fever. Appetite poor, but digestion good. Signs—slight dullness and feeble respiration over left apex low as the second rib. Patient was under treatment seven weeks and received twelve injections, and at the end of which time he had gained seven or eight pounds in weight. He, however, began to fail rapidly shortly afterwards and no doubt died within a few months, though I have not a record of the termination of the case.

Case 16.—Improved for a time but finally failed. December 26, 1890. Mrs. D. A. E., aged 29. Had been sick about three years, her trouble having dated from an acute pleurisy. Her mother died of consumption. Symptoms—occasional pain in the left lung, very despondent, nervous, losing weight and strength. Pulse 128, temperature 100⅕° F. Hoarse, dyspnœa, severe cough and free muco-purulent expectoration. No hæmoptysis. Signs—showed a large cavity in the upper part of the left lung, with marked dullness low as the seventh rib and subcrepitant râles over the whole lower lobe. Broncho-vesicular respiration at the apex of the right lung as low as the second rib. She was under treatment about seven weeks and received thirty-five injections. She was apparently much benefited at first, but at length began to fail and then went West, where she continued to grow worse until she finally died about nine months after her first visit.

Case 17.—Improved for a time. December 29, 1890. Mr. E. P. F., aged 20. He had been sick two months; no hereditary predisposition, and no previous pulmonary disease. Symptoms—pain in chest, loss of weight from 134 to 124 lbs., loss of strength, night sweats, dyspnœa, poor appetite and digestion. No hæmoptysis; pulse 150, temperature 101½° F. Signs—dullness and broncho-vesicular respiration over right apex as low as third rib, over left apex as low as the fourth rib with numerous subcrepitant and larger râles. Sputum not examined. Patient was under treatment seven weeks, received twenty-nine injections, and was apparently considerably benefited at first, but died within a few months after last treatment.

Case 18.—Improved for a time. July 9, 1891. Mr. M. M. J., aged 16. Two brothers had died of consumption; he had suffered no previous pulmonary disease. Had been sick two months. Symptoms—pain in right side, with loss of weight from 124 to 120 lbs. Very anæmic, night sweats, cough and expectoration, with poor appetite and digestion. No hæmoptysis. Pulse 96, temperature 99½ to 103° F. Physical signs showed involvement of right apex low as third rib, with broncho-vesicular breathing, and dullness in left supra-clavicular region. Sputum not examined. Patient was under treatment five months and was apparently much benefited, but after a time he began to fail and with the coming on of bad weather, went to Arizona. On the way he took cold and continued to grow worse after he arrived at his destination. He remained there about two months, then returned and died about four weeks after reaching home.

Case 19.—Improved for a time. October 7, 1891. Mrs. K. J. F., aged 24, no hereditary predisposition; had pneumonia three years previously. Symptoms—failing strength, loss of weight from 150 to 135 lbs., night sweats, dyspnœa, marked anæmia, cough and expectoration of muco-pus. No hæmoptysis. Digestion and appetite poor. Physical examination showed slight involvement of both apices, numerous tubercle bacilli in sputum. Patient was under treatment seven weeks and was apparently considerably improved at first, but began to lose strength and then went West. She remained for three or four weeks in Nebraska, where she did poorly and subsequently went to New Mexico, but grew continually worse and finally returned at the end of three months, and died shortly afterward.

Case 20.—Improved for a time. May 27, 1891. Mrs. A. B. M.. aged 27. One sister died of phthisis; patient had pleurisy one year previously. Had been sick eighteen months. Symptoms—loss in weight from 135 to 111 lbs., anæmia, dyspnœa on slight exertion, severe cough, and expectoration of about half a pint daily; pulse 114, temperature 101° F. Signs—right side in front, dullness low as the fifth interspace, behind extending one inch below spine of scapula. Respiration slightly harsh over this dull region and feeble all over the remainder of the lung. Left side in front, slight dullness as low as sixth rib and behind extending

down to the spine of scapula; feeble respiration all over the left lung with a few subcrepitant râles. Sputum not examined. Patient under treatment 22 weeks, and received 55 injections. She seemed very much benefited for most of this time, but as the winter came on it was thought best for her to go to a different climate. She went to Arizona, but caught cold upon the way and did not regain her health, though she improved after a few weeks, but ere long she took the influenza, subsequently grew rapidly worse, and died after a few weeks.

Case 21.—Improvement for a time. February 6, 1891. Mr. R. S., aged 23, had been sick for seven months; no hereditary predisposition, and no previous pulmonary disease. Symptoms—pain in the throat, cough and expectoration of purulent sputum, poor appetite and loss of weight and strength. Signs—larynx congested and thickened, but no ulceration. Dullness and broncho-vesicular breathing low as the third interspace on the right side and similar sounds over the very apex of left lung. Numerous tubercle bacilli in sputum. Pulse 132, temperature 99½° F. Patient was under treatment 11 weeks, receiving 33 injections, and was very greatly benefited. When last seen he was in better health than in the beginniug, but I do not know the subsequent history of the case.

Case 22.—Improved for a time. January 8, 1891. Miss P. B., aged 21. Had been sick three months. Her mother and one sister had died of consumption; no previous pulmonary disease. Symptoms, —pain under the sternum, loss of weight from 128 to 124 lbs. Strength fairly good, pulse 132, temperature 102° F., night sweats, dyspnœa on exertion, severe cough in the morning with expectoration of light greenish sputum in small quantities; no hæmoptysis. Appetite good and digestion fair. Signs—dullness over right apex marked as low as third rib, and broncho-vesicular respiration in the same region. A few subcrepitant râles over the lower lobe of right lung, and feeble respiration over whole of this lobe. No distinct signs on left side. Sputum not examined. She was under treatment five months and received 65 injections. Two months after treatment began it was noted that she was gaining strength, her pulse was diminishing in frequency and her temperature was lower. Two months later there was less cough, but the temperature had slightly increased. About this time diarrhœa began and continued in spite of any form of treatment. She gradually failed and died after a few months.

Case 23.—Much improved for a time. March 11, 1891. Mr. C. H., aged 31. No hereditary predisposition and no previous pulmonary disease. Had been sick six weeks. Symptoms—loss of weight and strength with cough and expectoration of muco-pus. Pulse 114, temperature 98⅘° when first examined. Physical examination revealed distinct signs of consolidation low as second rib on right side, with feeble respiration low as fourth rib and slightly enfeebled respiratory murmur over the whole right lung, Tubercle bacilli in sputum. Patient was under treatment five months, received 33 injections, and apparently was very greatly improved. The patient, however, knew that he had consumption and had frequently stated that he would never die of that disease, intimating that he would take his own life. He called a physician suddenly one evening under peculiar circumstances seeming to indicate that he had taken aconite or some other violent poison from which he died in about five minutes.

Case 24.—Improvement for a time. January 31, 1891. Mr. K. C., aged 24. No hereditary predisposition, and no previous pulmonary disease. He had been coughing for about four years. Symptoms—dyspnœa, weakness, chills and fever of three weeks duration. Pulse 130, temperature 101° F. Physical examination showed marked involvement of right apex as low as seventh rib and with numerous tubercle bacilli in sputum. Patient was under treatment 15 weeks, received forty-four injections, and was apparently greatly improved for some time, being able to go on with his work, notwithstanding the severe epidemic of influenza, which caused four-fifths of the numerous other clerks in the office to lay up for some time. Eventually the patient began to fail and concluded to go West. A subsequent history of the case I have not obtained, but have no doubt it proved fatal.

Case 25.—Much improved for a time. October 11, 1891. Miss S. K. M., aged 24. Her mother died of phthisis; the patient had suffered no previous pulmon-

ary disease, but had been coughing for six months. Symptoms—pain in the chest, weakness, anorexia, loss of weight from 133 to 95 lbs., night sweats, considerable cough, but no expectoration. She was markedly anæmic, pulse and temperature were noted as normal. Physical examination revealed much depression of the upper part of the sternum and infra-clavicular regions, but this had existed since childhood. Dullness over right apex as low as the second rib in front and behind, extending to the spine of scapula. Broncho-vesicular respiration and subcrepitant râles with feeble respiratory murmur in the same region. Numerous tubercle bacilli in sputum. She was under treatment for six weeks, received the injections regularly, and greatly improved in her general condition. With the coming on of the worst portion of the winter she went to the City of Mexico, when shortly after her arrival she took a severe cold and from reports seems to have had pneumonia, at any rate she did poorly for a number of weeks, but finally began to improve. At present she is said to be gaining.

Case 26.—Mr. L. E. J., came under my care January 27, 1891. Much improved for a time. There was no hereditary predisposition. He had suffered previously with bronchitis, and had been sick for about two years. Symptoms—pain in chest, weight diminished from 154 to 149 lbs, cough and slight expectoration; never had hæmoptysis. Physical examination showed a small tubercular ulcer in the larynx and consolidation of the right apex, low as third rib. There were numerous tubercle bacilli in sputum. He was under treatment five weeks and received 45 injections, during which time he steadily improved, continuing at his work. When last seen, nine months later, he was much better than when he first consulted me.

Case 27.—Much improved for a time. August 1891., Mr. M. S. J., aged 20. A brother had consumption; the patient had suffered from bronchitis; had been sick four months. Symptoms—anorexia, emaciation, loss of strength, night sweats, cough and expectoration; Never had hæmoptysis; pulse 102, temperature 101½° F. Signs—left apex, slight dullness above clavicle with sticky subcrepitant râles and increased whisper resonance. Tubercle bacilli in the sputa. He was under my care seven months, receiving the injections quite regularly for four or five weeks, subsequently about two or three times per month; during this time he was very much improved and when seen about two months ago was much better than any time before since he first came under my observation.

Case 28.—Much improvement. July 10, 1889, Mr. K. L. J., aged 26, came under my care. His father had died of some pulmonary disease, and the patient had been troubled with his present illness for two years. He was nervous, had lost some in weight and strength, was short of breath on exertion, and sometimes had severe cough, expectoration of about an ounce of yellowish matter daily. Never had hæmoptysis. Signs—dullness over left apex low as fourth rib in front, and behind over whole of left lung. Respiratory sounds feeble with râles, most distinct over the lower lobe of the lung, and broncho-vesicular respiration at the apex. Right lung normal. About the 1st of January, 1891, he was placed under the Shurly-Gibbes treatment, which he received regularly for two or three months and since that time he has received the injections about two or three times per month, all told amounting to 106 times. A large number of tubercle bacilli in sputa. The patient has held his own during all this time, though he has not really gained, yet considering the nature of the disease it must be considered an improvement. He is still doing well.

Case 29.—Much improved, December 12, 1891. Miss D. N., aged 28, no hereditary predisposition or former disease of the lungs. She had been sick for one year. Symptoms—loss of weight from 110 to 95 pounds, very weak, hoarse, dyspnœa, cough, appetite poor and fingers clubbed. The pulse was rapid and she had a temperature from 102° to 103 ° F., had had two hæmoptyses. Signs—slight depression over the right apex, with deficient movement and some dullness low as the third interspace. In the same region broncho-vesicular respiration as low as the second rib in front and extending one half inch below the spine of scapula behind. On the left side respiratory murmur slightly harsh above the clavical, no râles. Patient was under treatment six months and received forty-three injections, and was much improved. Fever disap-

pearing entirely and the cough almost ceasing. She is still doing well.

Case 30.—December 16, 1891, Miss O. R., aged 17, no hereditary predisposition and no former disease. Symptoms—poor appetite, loss of weight and strength, hoarseness, cough and a little expectoration. Never had hæmoptysis. Pulse 120, temperature 99°. Signs—arytenoid cartilages much swollen, dullness over right apex as low as the second rib, very distinct above the clavical. Exaggerated vocal resonance in the same region, with broncho-vesicular respiration above the clavical; no râles. No tubercle bacilli were found in the sputum. She was under treatment for three months and apparently had nearly regained her health though she still remained hoarse. During the latter portion of treatment she was under the care of her family physician. At the end of three months I advised that the injections be discontinued, but she speedily began to lose weight and strength, and they were then renewed with favorable results. At last report she was still doing well.

Case 31.—March 17, 1891. Much improved, Mrs. M. R., aged 21, no hereditary predisposition, had an attack of pleurisy about three months previously. Symptoms,—soreness in chest, loss of weight and strength, hoarseness, and great dyspnœa on exertion; cough and expectoration of about four drams of yellowish sputa daily. Had hæmorrhage two years previously and slight hæmoptysis several times since. Appetite good, pulse 108, temperature normal. Physical signs—right arytenoid much swollen with a papillary growth on its anterior surface; dullness and harsh respiration over the left apex, and numerous tubercle bacilli in the sputa. She was under treatment two months but received the injections regularly for only a short time. She improved much and at last accounts was doing well.

Case 32.—Much improved. November 7, 1891. Mr. F. E., aged 29, no hereditary predisposition to phthisis. Symptoms—emaciation, hoarseness for the last two years, occasionally slight expectoration of blood. Pulse 88 but said usually to be slower. Temperature ranged from 98 6-10 to 99 4-10° F. Dullness over right apex. low as second rib, broncho-vesicular breathing, as low as third interspace and a few sticky subcrepitant râles, with many tubercle bacilli in sputa. He was under treatment about three months, receiving however, only a few injections. He gained several pounds in weight, and at the end of this time the temperature and pulse, were normal, there was little or no dyspnœa and but little cough.

Case 33.—Much improved. April, 1888. Mrs. W. N. N., aged 26, no hereditary predisposition and no previous pulmonary disease. She had been coughing for about two months when first seen. Symptoms—pain in the upper part of the left chest, with slight loss of weight, and occasional cough and expectoration of from two to five drachms of muco-purulent matter; had slight hæmoptysis six months previously. Appetite and digestion fair. Physical examination showed slight thickening of the arytenoid cartilage with deficient movement of the apex of the left lung and dullness as low as the third interspace. Broncho-vesicular respiration and exaggerated vocal resonance with a few râles over the same area and extending a trifle lower. There were also a few subcrepitant râles over the apex of the right lung. This patient improved under treatment and finally appeared practically well, but at length during the course of gestation the disease was lighted up anew, and after confinement she ran down rapidly, cavities formed in the lungs, and at the earnest solicitation of her friends, though without the advice of her medical counsellors, she went to California. After a time she improved, but during her residence there she had an attack of what appears to have been tubercular meningitis lasting for several weeks. She subsequently grew better and spent the early part of the winter of 1890 and 1891 in Texas, but about the middle of January went to New Mexico and near the first of February, 1891, began the Shurly-Gibbes treatment. She began to improve coincidentally with the treatment and steadily gained, making remarkable progress the next two months. She then went to Colorado and continued the Shurly-Gibbes treatment, the injections being given less frequently for many months. She is still doing well. This was a desperate case when she went to California and her improvement since has been phenomenal. When the Shurly-Gibbes treatment was commenced she was using about twenty handkerchiefs per day to receive the

abundant muco-purulent expectoration, but at the end of two months a single handkerchief would suffice. Microscopic examination showed a large number of tubercle bacilli in the sputum. Although the benefit in this case must be attributed largely to the climate, yet the rapid improvement was coincident with the use of the Shurly-Gibbes treatment, and it has always appeared to me, as it has to her friends, that it had very much to do with the arrest of the disease. This is the only advanced case of tuberculosis in which I have seen any decided benefit which could be attributed to this form of treatment.

Case 34.—Much improved. September 1891. Mr. S. G., aged 31, no hereditary predisposition to tuberculosis and no previous pulmonary disease. Patient had been ill for several months when I first saw him and had just suffered a hæmoptysis. This patient was under my care for three years before the Shurly-Gibbes treatment was commenced. In February 1890, there was distinct consolidation of the apex of the right lung as low as the third rib. In June of the same year he was slightly improved but in September was again worse. He returned to Chicago after a prolonged absence during the fall of 1891 and desiring to remain in the city, I decided to place him under the Shurly-Gibbes treatment. Numerous bacilli were at this time found in the sputum. His general health was fairly good and his weight as great as at any time since I had known him. Treatment was begun on September 10, 1891 and continued, the injections being given about twice a week for several months. The patient apparently improved under the treatment and was able to attend to his work all winter long. During the latter part of the winter he was so well that the treatment was discontinued, but he soon began to fail and the treatment was renewed with decided benefit. He continued to do well until about six weeks ago when he began once more to fail, and I now find that the disease had again been lighted up in the lung so that I have directed him to seek a different climate.

Case 35.—Disease arrested January 13, 1891. Mr. M. T. J., aged 24. He had lost one or two aunts with tuberculosis, and had himself suffered from catarrhal pneumonia the winter previously and had been sick for two months when I first saw him. Cough and expectoration of a considerable quantity of muco-pus, pulse 124 and temp., 100 3–8° F. No hæmoptysis, had a fairly good appetite. No examination of the sputa. Signs—right apex dullness and harsh respiration low as second rib in front; similar signs behind extending to within one inch of the spine of scapula, no râles. Feeble respiration over the lower lobe of right lung, having only about 60 per cent. of the intensity of the left side. This patient was under treatment 11 weeks and received 24 injections. At the end of the time he appeared perfectly well and has so continued with the exception of one or two slight colds.

Case 36.—Disease arrested February 17, 1891. Mr. B. W. J., aged 29. The patient had at this time been coughing for four weeks and had recently raised blood; there was no hereditary history of tuberculosis and he had never suffered from any previous pulmonary disease excepting bronchitis. The weight was nearly normal, strength fair, pulse 96 and temp. 99° F. The sputum which amounted to about two ounces daily, consisted of muco-pus, and contained tubercle bacilli. Signs—loss of motion and dullness over left apex low as second rib, with indistinct subcrepitant râles. He was placed under treatment several weeks during which he received 36 injections; at the end of this time he appeared perfectly well and has continued in this condition ever since, with the exception of two or three slight colds, which have caused him to cough more for a few days at a time. Tubercle bacilli continue in the sputa, though his general appearance is that of a person in perfect health.

Case 37.—Arrested May 9, 1891. Mr. S. G., aged 22, no hereditary history of tuberculosis and no previous pulmonary disease. He had been ailing for a year and a half. His flesh and strength remained good, appetite fair, there were no night sweats, but he coughed and expectorated about an ounce of muco-pus daily. Pulse 114 temp. 100 $\frac{3}{5}$ ° F. No distinct dullness could be discovered, but there were occasional râles all over the upper lobe of the left lung. He was under treatment nine months during which time he received 65 injections. He gained much in weight and strength and at the end of this time appeared perfectly well and he still remains in this condition, though at the last ex-

amination bacilli were still found in the sputum.

Case 38.—Arrested November 12, 1890. Miss S. R., aged 24. Her father died of consumption. She had been sick about three months. Symptoms—pain in the chest, emaciation from 145 to 122 pounds, weak, a hacking cough and muco-purulent expectoration; pulse 102, temperature 99½° to 103° F. Signs—marked dullness and broncho-vesicular respiration above the right clavical. No microscopic sputa. She was under my care for eight months, during which time she received only 11 injections, these being made at first about once a week. She received other treatment at the same time as did all other patients, so that the effects of the Shurly treatment cannot be definitely estimated. At the end of the treatment she appeared perfectly well and she continues so at the present time, having gained in flesh and lost high temperature and cough. Although the history of this case is not complete, yet those who saw her during the course of the treatment have no doubt of the nature of the disease.

Case 39—Disease arrested July 17, 1891. Mr. K. P. C., aged 27. There was no hereditary history of consumption. Symptoms—pain in the chest, cough and slight muco-purulent expectoration with dyspnœa upon exertion. Appetite fair, and strength good, pulse and temperature not noted; had suffered six hœmoptyses. Signs—dullness over right apex low as second rib in front and behind extending two inches below the spine of scapula, marked broncho-vesicular respiration in the same region and subcrepitant râles. She was under my care for seven months during which she received 58 injections and at the end of that time she appeared perfectly well and so continues at present.

Case 40.—Disease arrested August 26, 1891. Mr. T. G., aged 34. No hereditary history of tuberculosis. He had diminished in weight from 133 to 128 pounds, but had a fair appetite and digestion, was troubled considerably with cough but had only slight expectoration. Had raised four ounces of blood about one month previous. Pulse 78, temperature 99 2-5° F. Signs—harsh respiration over apex of left lung low as second rib, but no râles and no distinct dullness. A large number of tubercle bacilli in sputa. He was under my care for six weeks, during which time he received 18 or 20 injections. He then went to Colorado and the treatment was continued by Dr. Hart of Colorado Springs. He slowly improved and finally returned to Chicago in apparent perfect health and so continues at the present time. In this case climate might be given some of the credit, but the patient himself attributes the beginning of his betterment to the treatment. The bacilli have disappeared from the sputa.

Case 41. Disease arrested December 23, 1890. Mr. N. F. C. aged 27. Hereditary history showed numerous deaths in the family of tuberculosis. He had suffered from pneumonia twelve years previously, and had been ailing four months when he first called upon me. Symptoms—pain in right side with cough and free expectoration, strength and appetite fair. Pulse 102° F. There had been no hæmoptysis. Signs—dullness over the inner one half of the right infra-clavicular region with prolonged respiratory murmur and exaggerated vocal resonance but no râles. Similar signs were obtained in the supra-scapular region of the same side. Numerous tubercle bacilli in the sputa. He was under my care for nine months, during the early part of which he received twenty-two injections, which seemed to give him decided benefit. Sometimes he experienced a tonic effect from the injection for thirty-six hours after it had been given. At the end of the time he appeared perfectly well and has so continued ever since, with the exception of two or three slight colds lasting for four or five days each. He still continues in good health. Disease arrested.

Case. 42.—Disease arrested January 14, 1891. Miss H. M., aged 27. No hereditary predisposition or previous pulmonary disease, but had been coughing for three months. Symptoms—pain in chest, weakness, fever, cough and expectoration of muco-purulent matter. There had been no hæmoptysis. Pulse 78, temperature 99⅘° F., but subsequently frequently as high as 101° or 102° F. All the symptoms indicated rapidly progressing tuberculosis. Signs—Dullness over right apex as low as third rib with harsh respiratory murmur. She was under my care thirteen weeks during which she received thirty injections. At the end of the treatment she appeared well and she continues so at the present time. In this case the sputum was not examined, but the symptoms and physical

signs as witnessed by my assistants and myself leave no doubt as to the diagnosis. Several others of those for whom I have recommended this treatment who have been taken care of by other physicians have apparently been much benefited by it. Three of these were treated by Dr. Walters of Woodstock, Illinois, who reports very great improvement or arrest of the disease I have not included them in this report. When I first began the use of the Shurly-Gibbes treatment, I gave it to all phthisical patients who came to me, but in many instances only one or two injections were given, and often the patient was not seen after the first or second visit, as many of them came to me from a distance and soon returned to their homes.

An analysis of these 42 cases, will show that 14, or one-third, received no apparent benefit, but it will also show that twelve of these were far advanced when they first came under my care. Fourteen others were apparently decidedly improved for some time but ultimately they grew worse, and six of them have since died. Of the 14 cases that were not improved, I believe that all are dead. Six of the 42 cases are noted as much improved, all of them have been under observation for many months, and I believe that they are, with one exception all doing well at present. Four of these when first seen were in the early stages of the diseases having been ill but a few months and some of them will probably recover. Of the 42 cases eight are noted as arrested. All of them are at present in good health, though in those where the sputum has been examined recently, of which there are four, the bacilli continue and in all these four, and possibly in others there is still expectoration of a small amount of muco-purulent sputa every day, amounting possibly to half a dram.

It will be seen that whatever the results of the treatment, it does not destroy the tubercle bacilli, a fact which was established early by Dr. Shurly himself. During the last few months I have discontinued the use of chlorine as an inhalation substituting for it in most instances inhalations of iodine, which has seemed to me more beneficial.

It will be seen by the analysis that a little more than 19 per cent. of the disease has been arrested. In about 14 per cent. the patients have been greatly improved, and in 33 per cent. they were apparently benefited for some time, though they ultimately failed. It will be noticed also that nearly all of the patients who were not benefited, were already far advanced in the disease, when first given the treatment; and that the majority of those who have been treated in the inception of the disease have been greatly improved or have recovered. But it will also be observed that the treatment is not entirely valueless in some advanced cases. Considering these facts, I think that I am justified in believing that we have in the Shurly-Gibbes treatment for tuberculosis, a method of great value in incipient cases, which adds much to their chances of recovery. I do not think we should rely upon it alone in any case, but for myself I would feel that I had not done my patient justice if I had not given him the benefit of its trial, providing the disease of the lung had not extended below the third rib, when he first came under my observation. While the treatment may occasionally prove beneficial in advanced cases, I would not recommend it to such patients excepting where they desired to try it after the chances have been fully explained. In only one of the cases reported was a history of previous syphilis obtained, and this case was so clearly tubercular, that I did not hesitate to place it in this list; but it is at once apparent that where doubt as to the tubercular or specific origin of pulmonary disease existed, this would be an appropriate treatment for trial.

36 Washington St.

SYRINGES FOR SUBCUTANEOUS INJECTION.

The *Journal de Médecine et de Chirurgie pratique*, 1892, 2e. cahier, p. 49, gives full and accurate information concerning the syringes of Malessez, Félizet, Gimbert, Burlureau and Guerder, and Peter. The last three forms possess especial interest, in that the treatment of tuberculosis by injection of medicated oils (creasote 1 to 14, iodol iodoform 1 to 29, crystallized phenic acid 1 to 49, or guaicol) is now recommended. The technique is fully given, the accidents carefully stated, precise antiseptic precautions noted, and, taken as a whole, this paper is a complete guide to the practice of voluminous subcutaneous injections.

SEPSIS, WITH A NARRATION OF A FEW INTERESTING AND INSTRUCTIVE CASES.*

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1. In these blessed days of antisepsis, thanks to Pasteur, Lister and Koch, we are at least permitted to come to our patients with *clean hands and a clear conscience.* These sanitary precepts are founded upon the dire lessons of sepsis. This dread process is the dispenser of the admonition—"Let another man's shipwreck be your seamark." And yet, how little is its intimate nature understood. It would seem that this were still largely an unexplored field in which much work need be done.

2. Our theme therefore is not so easy to define. A septic process is so complicated that a number of complex factors must necessarily enter to produce it. That stage in our knowledge is not yet at hand, that we can fully appreciate all these factors so curiously inter-woven in their relations to each other, as they are concerned in sepsis. However, it may be briefly defined as infection and intoxication, which arise when specific, pathogenic germs gain access to the body, and finding conditions favorable, they grow and multiply therein, and in so doing elaborate a chemical poison which induces characteristic effects. These effects are sometimes only local, or both local and systemic; this will often only depend upon the kind of germ, or, both upon the kind of germ and the kind of host.

3. It is in physical life, just as it is in social life, the lower grade is striving to oppose the higher. *Instability* of organized structure and function during life, as well as of organic material after death, make bacterial life possible. Under these circumstances organized form falls prey to bacterial life's action, by which means it is returned to its primary or inorganic state, from whence it was taken. In this process *the transition products necessary to septic intoxication are given.*

4. In a scientific way this fact was first proven by Panum it 1856. He showed that poisons comparable to venom of serpents, curare and nicotine and not to be destroyed by either boiling or evaporation, are formed during decomposition of animal matter. Since his time Brieger deserves credit for isolating a number of these putrefaction ptomaines; and, what is still more important, he was the first one to demonstrate the fact that certain poisons are also formed within the living body, by certain germs causing infectious diseases. Hence it is evident that every germ which causes disease in man does so by virtue of its chemical products. These poisons may result first from the secretion by some of the bacterial cells themselves; secondly, from the splitting up of complex compounds of organic source by the activity of bacterial life.

5. Ever mindful in her conservatism, nature provides a restorative process, to regenerate tissues impaired by traumatism and disease. It resembles in every respect the physiological process of growth of tissues, just as is observed during development of the body; and, like in other development processes, more or less heat is evolved. Embryonal cells promptly undergo transformation into tissues which correspond to the anatomical seat of lesion. Unmolested, this process *never* proves destructive, but *always constructive*; and, it ever promptly attains its end. However, molested by bacterial life, a process *never* constructive, but *always destructive*, is inaugurated; and *abnormal* heat is generally evolved. Embryonal cells are *not* promptly, and more often *not at all*, transformed into tissues corresponding to the seat of lesion; but, are broken down and appropriated to the formation of poisons which are utilized in intoxication. This complicated process *never* promptly attains a salutary end, but only too often destroys the host.

6. Narrative No. I. somewhat uniquely illustrates virulence, an old and only too oft-told story:—Mrs. ——— is on a journey of several hundred miles; while on the train she is seized with pain and flooding, and, as she puts it, "something drops while in the water closet." After reaching her destination flooding still continues for about one week. Loath to seek advice, failing strength and offensive discharges finally constrain her to do so. On examination the doctor find *os uteri* tightly puckered up; forcibly dilating it, he removes a small amount of débris.

*Read before the Ohio State Medical Society, at Cincinati, O., May 6, 1892.

Three days thereafter patient takes a violent chill followed by progressive inflammation of the surrounding tissues and involving the pelvic peritoneum. For three days the patient it entirely unconscious, pulse and temperature fluctuate, at times the former ranging over 160 beats per minute and the latter, over 105° F. Writer is called per telegram; on my arrival patient has regained consciousness and is somewhat better. I tell the doctor and his associate, who together are now attending, that the trouble is evidently septic, but this they are not inclined to believe. But, very soon there are thirty-five inoculated *puerpera* in the community; out of which number, Mrs. ———, is the only one who survives. Even one of the physicians becomes inoculated from some one of his patients and he has a very serious time to recover. Mrs. ——— after four years, suffers since from chronic pelvic abscesses.

7. It is of course assumed that infection is always from without. Germs may be conveyed into the body in many different ways. Into mucous channels, for example, they may find their way by inhalation or by being swallowed with the food. True, the hydrochloric acid contained in the gastric juice serves often to protect the digestive tract from infection; but under certain circumstances these invaders acquire an unusual amount of resistance, that they can withstand the action of the stomach's acid secretion, as well as can the spores. After alighting on a mucous or cutaneous surface, the infecting germ furthers its journey into the tissues through a solution of continuity of structure, be it ever so insignificant. It is a noted fact, that infection is even more *often* apt to occur through a merely slightly broken surface that does not bleed, than through a bleeding one; because, in the one case the infecting agent is readily taken up by the absorbents, while in the other, it may be washed away. Germs always follow the avenues of *least resistance*: Some forms find in the blood, others in the lymph spaces and vessels, the conditions most favorable for their proliferation. And even after they do gain access to the body, the same kinds of infecting agents do not always produce like effects on different hosts. Sometimes, in one instance it may prove only a local process, while in another, it may prove both local and systemic. It is believed that this will generally largely depend upon the number in which the invaders are present—i. e., the size of the dose—upon the varying virulence which the same species under different circumstances possesses, as well as the varying capacity of the host's resistance to ingress of the germs.

8. Narrative No. II. Albert K., aged five years, gets his right hand into a pulley, tearing away distal phalanges of the little and third fingers, and more or less crushing the whole hand. His wounds are treated with iodoform dressings, yet parts suppurate freely; however, the body suffers no systemic effects. On a very busy day the father brings his boy to my office, to obtain new dressing; to gain time, I request the father to proceed first in removing the old one. In doing so the father runs the tip of his right thumb over the point of dressing pin and barely nicks it. Three days after, he had a decided chill followed by high fever and he is a very sick man. The thumb is very painful and swollen, and progressive, destructive inflammation sets in, that involves the entire hand and forearm. Three incisions are made to draw off the pus; one into the thumb, one each into the hand and forearm respectively. Despite our treatment, the entire belly of flexors of the thumb sloughs away, and the father but very slowly recovers, while the son's wounds promptly heal and he is at the same time enjoying the best of health. This narrative first shows the difference of havoc produced upon the son and father respectively, by the same kind of pyogenic micro-organisms; further, it shows in the father's case the aptitude of infection through an insignificant portal.

9. Both character and degree of infection and intoxication will first depend upon the kind and competency of the infecting agent on the one hand, and secondly, upon the kind and susceptibility of the host on the other hand. These are problems towards which the complex factors of the microbe's individual equation, as well as the complex factor of the host's individual equation, must respectively contribute to solve. Diverse tissue metabolism resulting from the whims of fluctuating nutrition and waste, both during health and disease, must no doubt variously affect the parasite's environment

and, therefore, also its capability, as well as the host's responses to the bacterial reaction. With such variable conditions, chemism and concomitant symptoms must therefore *often* and *widely* differ.

10. Narrative No. III. Mr. E. C. M., aged sixty years, is afflicted with erysipelas involving the face, ears and parts of the neck and scalp; which is accompanied by uncontrollable nausea and vomiting. From Sunday to Thursday the temperature ranges between 100.5° F., and 103.5° F,, pulse between 86 and 96 beats per minute. On Thursday the temperature drops to 86° F. and the pulse to 66 beats per minute, *and at the same time nausea and vomiting cease*, but the local conditions remain about the same. This shows that chemism radically changed on Thursday, and with it did also all of the systemic manifestations, while local appearances are seemingly not much changed.

11. Narrative No. IV. Mrs. S. F., about thirty-five years of age, gets pregnant in August, and her pregnancy is accompanied by uncontrollable vomiting, that she rapidily emaciates and fails in health. It so continues until one week before Christmas, when she aborts. The family physician is called. Patient appears to him rather large for the length of time of pregnancy. An abdominal effusion is noticed by him. The puerperal state in *itself* passes by uneventfully; only vomiting will *not* cease. Writer is called in consultation, and the patient is found *extremely* emaciated and enfeebled, with a very rapid pulse of 144 beats per minute, and a *remarkably vacillating* febrile movement, fluctuating within two hours first from 100.5° F. to 97.5° F. and then to 101° F. The tongue shows two large necrotic patches. The stomach is very irritable, rejecting everything and is distended with gas. The spleen is considerably enlarged, and as already stated there is some abdominal effusion. Close inquiry elicits the fact, that patient had fever for some time before the miscarriage. Vomiting not ceasing, we know that *now* its cause is pregnancy, and from the other data at hand, it appears that our patient suffers from sepsis. The infection must be traced to the *primae viae* and no doubt prior to puerperium. This would illustrate pre-disposing influence of malnutrition and temperature vacillation, characteristic of some forms of sepsis.

12. The entrance of the different bacteria into the body, their residence there, and their means of support result in different processes. Some of these processes are always local, and never more, as in gonorrhœa (?), infectious ophthalmia, etc. There are some in which local evidence is almost *nil*, while the systemic manifestations are alarming, as in tetanus, la grippe, etc. These, no doubt, are constant biological stipulations. While again, we have to deal with some bacterial processes which are not constant in their behavior; at one time they are only local, while in another, both local and systemic, as in pyogenesis, etc. These as we have seen, are mainly governed by the host's own resisting powers. Then we have many mixed processes known in bacteriology as symbiosis; as may be found with diphtheria, typhoid fever, tuberculosis, etc.

13. Progress of infection and intoxication is encouraged by negative response of the host's immunity-giving agencies. When bacteria are brought into contact with living tissues, certain wandering cells come to its rescue, devouring and peptonizing these offenders. This is the doctrine of phagocytosis, first demonstrated by Metschnikoff. Phagocytosis depends upon the character of "chemiotaxis." By this is meant the attraction ("positive chemiotaxis,") or repulsion ("negative chemiotaxis") of phagocytes. Prudden and Hodenpyl believe that the phenomenon of "chemiotaxis" is due to chemical action of bacterio-protein. The infecting agents must also meet the germicidal proteids of the blood; these may prove negative and hence conducive to the inroads of infection. Finally, when bacterial products are not rendered inert by metabolism going on within and their elimination is ineffectual, then results *progressive intoxication.*

14. The local changes resulting from bacterial action are due to the toxic "irritation which the sympathetic nerves receive and this leads to afflux of blood to the irritated part owing to the dilatation of innervated capillaries. The congestion, the stasis, the altered local diffusion and nutrient phenomena, are the natural consequences of the local irritation." Further, morphological changes will depend upon the different nature of the poisons. For instance, many bacteria form peptic

ferments which break down and dissolve the infested tissues; in other words, the tissues are converted into a condition of disintegration or necrosis of one sort or another. Then again, in some way not yet known to us, very peculiar and characteristic inflammatory changes may be brought about which result in the formation of new tissues of various kinds. As examples, we may cite tuberculosis, syphilis, etc.

15. We have seen that when pathogenic germs find a *locus minoris resistentiæ*, how they may enter the living organism and there can produce their various toxic effects. True, the chemical products have not yet all been severally isolated that must be formed in the different processes. Yet, enough work has been done in this direction, to prove that this is the right path of research to follow in pursuit of the essence of truth. But the living body is such a complicated structure of unstable component parts and functions that it is an easy matter to understand how manifold is its versatility of metabolic processes in health, how much more so in disease, *and especially so in septic diseases*. Therefore, never forget, that we have to deal with *individual*, as well as with the *materies morbi* in our diagnosis making. The symptoms of the different septic processes may manifest themselves is such a variety of perplexing ways, that it peremptorily behooves us to be on our guard. It would be a blessing if there were some unswerving pathognomonic guide to direct attention. The nearest that one may come to this is, adopt the eccentric, but never unsafe philosophy of the pangermist, to always look for sepsis. So varyingly do these different septic processes manifest themselves, therefore, always think of them. t is easy to diagnose an advanced tuberculosis, a septicæmia in the puerperal state, or a pyæmia when the local evidences are apparent; but not so, when such landmarks are not plainly manifest.

16. The bacterial poisons all more or less affect the central nervous system. This fact is variously expressed in the different septic processes. For instance, some may be especially depressing in their action upon the heart, even morphine- and veratrine-like; or they may induce atropine- and digitaline-like, and other peculiar effects resembling those of other vegetable alkaloids. Others, no doubt, have a perverting influence upon trophic nerve functions. While all of them at different times, manifest a predominant or selective action upon certain individual nerve-tracts. This may prove a source of perplexing annoyances, well calculated to over-shadow other symptoms and to mislead in diagnosis. To illustrate, let me refer to a case of pyæmia reported by me in the *Columbus Medical Journal* of March 1892, in which is shown the selective action upon the phrenic nerve. It is the case of my own brother, who for five days and five nights almost incessantly hiccoughed, sometimes from 900 to 1500 times per hour, both while awake and asleep. There was a suppuration of the left ankle, from which a metastatic pus-localization formed in the interosseous space of the left forearm, just below the elbow. The patient recovered, but very slowly and conditionally.

17. Symptoms of elimination and different types of fever often render signal service in diagnosing the different septic processes. Yet, even these may prove inconstant: e. g., who has not seen constipation in typhoid fever? or the type of this fever widely deviate from its form of continuousness, or even seen it drop by times below the normal? A combination or succession of hyperthermic and hypothermic phenomena may become manifest according to the combination or alteration of poisoning by the deleterious physiological products, or their antagonistic action. Inconstancy and fluctuation are therefore often characteristics of septic processes; especially is this true of pyæmia.

18. No doubt, explanation must be largely sought in difference of chemism. But this is yet a very hazy theme; notwithstanding the remarkably broad statement made by Dr. A. Brown, and quoted by Aitkin:—

"(1) Poisoning by the 'Extractives' is attended by hyperthermia."

"(2) Poisoning by the 'Animal Alkaloids' is accompanied by hypothermia, etc."

To this, in a letter to me, Prof. Vaughan says: "The statement is very unfortunate and is not true. The term "Extractives" is too indefinite to discuss. That "Animal Alkaloids" are characterized by the production of hypothermia is not true, is shown by a number of facts entertained in our work on Ptomaines, etc." (As

illustrations see the work of Vaughan and Novy, pages 121, 123, and 140, 141 2d Edition). However, this has no practical bearing with us. After all, we must have recourse to discrete symptomatology; it alone can guide us in each particular sep tic process. Hence, we must always carefully, but promptly consider every single diagnostic detail, since so much depends upon a *proper* and *early* diagnosis. The advancement of bacteriology and physiological chemistry, which go hand in hand, will finally triumph and do a vast deal to elucidate and eventually lead us to a correct and satisfactory conception of sepsis.

19. The treatment of septic processes may be told in one word; it is antisepsis. This means that we shall strive to over-power these pathogenic invaders. This is not so easy in practice as it would seem in theory. After pathogenic microbes have gained entrance into the body, it is more difficult to destroy them than when only in the wound. We are generally able to prevent wound diseases by an antiseptic and aseptic operation and by antiseptic dressings, since in that way we shut off the natural and only mode of entrance into the wound; but it is quite otherwise when we have once to deal with systemic infection and intoxication, as no drug has yet been suggested in any one of the septic processes, that proves at all times efficient as well as harmless, internal use of bactericide agents being very unreliable and occasionally injurious to the body. Our present knowledge of the intimate nature of sepsis and of the doctrine of immunity would seem to suggest that so far our chief reliance must depend upon cleanliness, cheerful hygienic surroundings, upon proper nutrition, to reinforce the tissues in their defensive powers; and, upon elimination, to drain the various toxines from the system through the different emunctories.

20. Hence, since within favorable environment every specific germ produces its own characteristic poison, and each poison its own characteristic effect, it is very important and desirable, that standard vitality of structure and adequacy of function, not only of larger organs, but of every solid and fluid tissue, of every individual component cell and its protoplasm be well maintained. On these conditions depends our safety; because, within them is vested the power to check invasion and the progress of micro-organisms.

SPINA BIFIDA OCCULTA.*

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On January 25th, 1892, I was called to J. L., a young man, who, though wasted by a month's severe sickness, gave promise by his muscular endowment, of the eulogium I had heard a farmer of my acquaintance bestow upon him, that he was the most profitable hand he had ever hired.

I found him with an irritable pulse of ninety-eight, face bedewed with perspiration and many signs of hectic fever; with great prostration, and all the symptoms justifying the prognosis of the medical man who had preceded me and who said to his mother that he would not live ten days. He was twenty-four years of age and wasted as he was, it was a laborious task for his friends to support him twenty inches above the bed, while I examined his back where all his complaint centred. I found it one vast burrowing abscess, from his shoulder-blades to his hips. It had been lanced at two points not far from the spine, without any attempt at a valvular opening, and without any regard to antisepsis. It needed but very little encouragment from a probe to evacuate from fifteen to twenty ounces of fluid, part of which was unmistakably pus, and part seemed something else, and much thinner. I found a yielding elastic, protuberance at the foramen-magnum, about the size and shape of half an egg, which his mother insisted never showed itself till after he was ten years of age. Convinced from the first that we must have more available means of suspending him above the bed for the purpose of dressing and examining his back, I bethought myself of a block and tackle, and it answered an excellent purpose for thirty-eight days. Feeling assured that the wonderfully profuse secretion from his back, jeopardized his life, I sent into every part of the abscess, by means of a small glass syringe, a four per-cent solution of carbolic acid, and as I found it immediately effective, I reduced the strength from day to day, till I was soon using only a two per-cent solution, and the secretion of pus from all the apertures did not amount to

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one-fourth of a teaspoonful per day, and the thinner fluid which exuded from two of what were now ulcers, at the point which had been lanced, did not amount to more than one-fourth of a teaspoonful. I was satisfied that this thinner fluid had been intended by nature for lubricating the cavity of the spinal cord. I once had borne into my hands an ordinary case of spina-bifida, in which before I left the house I had to protect the exceedingly thin membrane with a piece of oiled-silk, and as long as the child lived, there was an exudation of similar fluid. I felt under many obligations to the ladies in his neighborhood for supplying him with delicacies from their own tables, till a natural, healthy appetite rendered it unnecessary. For two months now, the patient has sat upon a chair for me to dress his back, and although I talk encouragingly to him, it seems almost impossible to cover with cuticle the ulcer from which exudes the thin fluid. He is industrious, and saws all the wood for family use. The bed-sores, (at one time very threatening) have all healed, and he seems in a fair way for perfect recovery, but I shall always give a guarded prognosis of his future. I cannot learn of any blow or strain his back has received at any time, but I learn from measurement that his left arm is a full inch smaller than his right arm, and from palpation I learn that from about his fifth cervical vertebra clear down through the dorsal and into the lumbar, I cannot distinguish any projections for any of the vertebra below the fifth cervical. He commenced complaining of severe pain about the foramen-magnum about January 1st, and the tumor at that point increased in fullness at that time, though apparently empty. I consider his ailment as a manifestation of *la grippe*. When tired, he complains of a tingling sensation in the third and fourth fingers of his left hand. I view the primary lesion of la grippe as a neurosis; followed in many instances by sequels threatening to life, through pulmonary or bronchial disease.

FOR PAINFUL GUMS IN CHILDREN.

The Paris correspondent of *Arch. of Pediat.*, mentions the following:

℞ Cocain. hydrochlorat.
Camphor. pulv ..... āā centigrammes x.
Glycerini ..... grammes x.
Essent. menthæ (to flavor) .... q. s.—M
Sig.—Rub a little of this on the gums with the finger.

WHAT'S THE MATTER?

By J. M. SHAFFER, M. D.,
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That is the all-important question which confronts the physician. The shelves of libraries are full of books which present it in one form or another. It is the foundation thought of all the multiform divisions of the art and science of medicine. What's the matter? and physiology, pathology, anatomy, chemistry and the like try to give an answer! The strong man is stricken down in field or street or shop; he lies as he fell; his pupils, skin, breathing, pulse ask you what's the matter? He is unconscious; he neither knows nor cares; and the automatic acts make the inquiry. The infant spreads its oral muscles to their utmost capacity and cries with its full volume of voice, draws up its legs and throws its arms in varied movements; tears run over the cheeks: the tongue and chin quiver and these all insist upon the question, what's the matter? The boy gets a hurt on some part in his sport, and it is of immeasurable worth to know what's the matter. A score of patients will not only tell their symptoms, but, educated in the medical almanacs and still more specious descriptions of disease in the daily press will tell what's the matter. They buy and pay for, and drink, swallow, apply and rub in dollars and dollars because they have discovered what's the matter. People feel their own pulse, examine their own tongue, go so far as to take their own temperature; estimate the significance of a pain—of a disordered sensation—of a morbid condition of the mind—and straightway determine for themselves, what's the matter and, of course, dose themselves with what some one told them was good for this thing, that thing or t'other thing. The physician's very first office is to discover what's the matter. The man who knows positively what's the matter has the advantage over the man who is merely a good guesser. Here in a given patient is an assemblage of signs and symptoms, a co-relation or an opposition chill, fever, loss of appetite headache. Bilious fever—that's what the matter. But it may be a hundred other things by name and it may not be bilious fever at all; be *certain* what's the matter. A lad meets with a tumble and hurts a

knee or hip: 9,000 other boys fell and hurt a knee or a hip; but the one boy had a pain left recurring here and there; he doesn't mind it, but after a while he walks lame. What's the matter? If not accurately determined, this one boy will go through life on crutches. And so on. What's the matter? is the one thing the physician *must* know positively clearly and be able to give a reason for his *knowledge*—absolute; not, for his opinion merely. It makes very little difference what is not done, provided it is known what's the matter. The vast majority of cases could recover without any medicine if all concerned were certain as to what's the matter and it may be that once in a century or two a man dies because the physician did not know what's the matter. It is not improbable that once in a great while a patient recovers in spite of the treatment, the doctor never being able to tell—not knowing—what's the matter.

The momentuous question at the bedside must ever be, what's the matter. A lawyer has the advantage over the physician. Ordinarily the lawyer knows little more of law than the common people, but he knows where to find it when he wants it: and can tell his client what's the matter. The physician cannot leave his patient and ransack his library: but he must *know* then and there what's the matter. If he does not know, it were well to give a placebo, that may do no harm until he ascertains certainly what's the matter. There can never be a justification for a shot at random; that is merest charlatanism. Better hesitate than prescribe a remedy unless there is unmistakable certainty as to what's the matter.

There is opportunity to score a point in telling the patient what's the matter. A lady had been bled, some drops of blood escaped into the subcutaneous cellular tissue causing a discoloration very frequent in such cases, and is of no significance. She sent for the doctor. He was a plain man, he told the patient it was caused by a few drops of blood settling in the skin; and told her to put on a wash of very weak sugar of lead water; that it would go away in a day or so, and she needn't bother about it. But he didn't tell her what's the matter.

The lady was alarmed, and wanted to know what's the matter. She sent for quite another sort of man. Oh! my dear madam, you would know what's the matter? We have here an ecchymosis.—Great Scott! you don't mean it? We will bandage it, carefully moisten the dressing with a solution of saccharum saturni, called in the Eastern Hospitals, vegeto-mineral lotion. There is no immediate danger. In a week the sanguineous effusion in the adjacent areolar tissue will be absorbed and the parts restored to their normal condition. Five dollars—thanks. She found out what's the matter.

Many cases and diseases are incurable; we must know what's the matter to satisfy the friends of the patient. Very many diseases have a determinate course; we must tell patient and nurse what's the matter, and that we can only keep away injurious influences and conduct the case to recovery. To know what's the matter is the enduring crown of glory which encircleth the brow of the well-bred, intelligent, thoughtful, Christian gentleman and physician.

GENERAL PARALYSIS OF THE INSANE IN A BOY.

Charcot and Dutil (*Arch. de Neurol.*, March, 1892) describe a case of general paralysis commencing at the age of 14 years. Up to that period the boy had exhibited nothing abnormal in his mental or physical development. Naturally vivacious and intelligent, his disposition changed at the incidence of puberty, and dementia set in; he became dull, and anergic, lost his memory, could not keep accounts. At 16 years, mental decay and arrest of somatic growth were striking; the patient's appearance was childish, evidences of pubescence were slight. There was no emotional exaltation or grandiose delusion. Tremor present in lips, tongue, and hands; anisocoria, with abolition of light reflex; articulation notably impaired, gait unsteady. Now and then an attack of "sensory epilepsy" occurred; a tingling sensation ascended from the right foot to the right half of the trunk, head, and tongue, and thence spread to the right fingers. Recurrence of so-called "congestive seizures" completed the clinical picture. Neuropathic heredity seemed to be the only recognizable ætiological factor; the patient's father was an inebriate, a first cousin was insane at periods, two grandparents died paralyzed.—*Brit. Med. Jour.*

Selected Formulæ.

AMENORRHŒA.

Prof. Lutaud, of Paris (*Manuel des Maladies des Femmes,* Paris, 1891), recommends the following formulæ in amenorrhœa:

℞ 1. Extr. nucis vomicæ.....gms. 1.50.
Ferri arseniat.....dgms. 6.5.
Mangan. sulphat. sic..... .. gms. 12.
Sufficient for one hundred pills. Three pills a day.

℞ 2. Ferr. et potass. tartrat.....gms. 5.
Extr. artemesiæ..... } āā gms 2.
Extr. absinth..... }
Aloes.....gm. 1.
Essent. anisi, q. s.
Sufficient for fifty pills. Two pills after each meal.

As an emmenagogue:

℞ 3. Pulv. indigo.....gms. 30.
Pulv. artemesiæ..... .. gms. 15.
Pulv. zinziber.
Pulv. valerian.
Use raspberry syrup sufficient to mix well; add honey as much as is desired. Two to four coffee spoonfuls two to four times a day.

In chlorotic amenorrhœa:

℞ 4. Ferr. dialyzat..... } āā gms. 50.
Aq. cinnamon..... }
A dessertspoonful two or three times a day.

THE THERAPEUTIC APPLICATIONS OF THE PHENATE OF COCAINE.

This salt is highly recommended by Von Oefele (*Revue de Therapeutique Medico-Chirurgical*, April 15, 1892) in practical medicine. The analgesic action of the new combination is said to be superior to that of cocaine by itself, while the small quantity of the alkaloid contained in it lessens the chances of producing poisonous effects, when hypodermatically administered. Here are some of the combinations recommended by the author:

(1) As a local application to the pharynx, tonsils, etc.:

℞ (*a*) Phenate of cocaine..... 1 gramme.
Absolute alcohol.....10 grammes.—M.
Sig.—Use externally.

℞ (*b*) Phenate of cocaine..... 1 gramme.
Alcoholized sulphuric ether.....10 grammes.—M.
Sig.—External use.

(2) For hypodermatic injections, and for instillations into the ear, as in the case of otalgia:

℞ Phenate of cocaine.....10 grammes.
Dissolve in alcohol..... 5 grammes.
Add distilled water..... 5 grammes.—M.
Sig.— Inject the contents of one to three Pravaz syringefuls of the solution.

(3) For spraying, or for inhalations, in affections of the larynx and bronchi:

℞ Phenate of cocaine.....10 centigrammes.
Menthol..... .....25 centigrammes.
Dilute alcohol.....10 grammes.—M.
Sig.—One fifth of this solution is used, for spraying, in the course of the day.

(4) In the treatment of acute and chronic nasal catarrh:

℞ Phenate of cocaine.....20 centigrammes.
Pulverized boric acid..... . 2 grammes.—M.
Sig.—External use.

(5) In the treatment of affections of the stomach:

℞ (*a*) Phenate of cocaine.....5 centigrammes.
Subnitrate of bismuth.....2 grammes.
Mix and divide in five *cachets.* Sig.—In cases of gastralgia, one *cachet* in the morning, before breakfast, or one hour before the expected principal crisis.

℞ (*b*) Phenate of cocaine.....7 centigrammes.
Powder of condurango..... ....1 gramme.
Mix and divide in ten small *cachets.* Sig.—In cancer of the pylorus, one *cachet* in the morning before breakfast.

—*Univ. Med. Mag.*

ACUTE ARTICULAR RHEUMATISM.

Dr. A. Hennig (*Le Bulletin Médical*, No. 44, 1892) recommends the following potion in the treatment of acute articular rheumatism:

℞ Salipyrine..... ..... 6 grammes.
Glycerine.....14 grammes.
Raspberry syrup..... 30 grammes.
Distilled water.....40 grammes.
To be taken in the course of the afternoon, a spoonful every fifteen to twenty minutes.

According to the writer, the action of salipyrine, like that of the salicylates, is especially manifest if one administer it during the afternoon, in frequently repeated doses, with a total dose of from four to six grammes. Two or three hours after the last dose the temperature falls one or two degrees and the pains become less. The patient passes a good night, and, although the temperature rises the next morning, it does not reach the height that it did before.

IN UTERINE HÆMORRHAGE.

Huchard (*Revista de Ciencias Médicas de Barcelona*, April 25, 1892) uses this prescription:

℞ Ergotine.
Sulphate of quinine, of each.....2.00 grammes.
Powder of digitalis.
Extract of hyoscyamus, of each.0 20 gramme.
M. and make twenty pills. Sig.—From five to eight pills per day.

PALATABLE CASTOR OIL.

Treat the best grade of castor oil with hot water repeatedly, then add enough saccharin to give it a syrupy taste. A minute quantity of the aldehyde of cinnamon oil and of vanilla flavoring will cover any remaining disagreeable flavor. This process is said to impair neither the efficiency nor permanence of the oil.

THE

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Leading Articles.

RECTAL GONORRHŒA.

The literature on the subject of rectal gonorrhœa is very meagre. The first mention of this variety of gonorrhœal infection we find in French writings.

In 1879, Hecker, of Paris, spoke of having observed a putrid discharge from the rectum of men and women who indulged in *coitus praeternaturalis*, which resisted all treatment. Rollet, in 1868, reported the case of a woman who in order to assist defæcation had inserted her finger into the rectum, and in this way carried the infection from the urethra, at which time she was suffering from gonorrhœa.

Rectal gonorrhœa in the male, according to the majority of French writers, occurs principally among those who submit to rectal coitus, especially boys who are used for pæderastic purposes. In the female it frequently results from self-infection, since the gonorrhœal secretion runs down between the labia, and so reaches the anal opening.

The first symptoms of rectal gonorrhœa are local itching, stinging sensations, and a feeling of uncomfortable warmth in the rectum. Later, painful defæcation and tenesmus are added. Objectively, one may find inflammation and swelling of the parts, as well as great irritability of the anal mucous membrane, and many erosions marking the parts almost like a map. This last are caused by the abundant secretions, which also cause eczema of the anal region. Examination will also usually reveal the well known signs of pæderasty.

In many cases rectal gonorrhœa can be successfully treated by suitable means, but more frequently it proves to be a most stubborn disorder, assuming a chronic form.

Our knowledge of this subject has been greatly enriched by a contribution by Dr. Franz Frisch, of Wurzburg, in the *Medi-*

cinische Neuigkeiten. Dr. Frisch gives the history of a case that will bear careful reading. The patient was a girl, seventeen years of age, a "puella publica" by occupation, who applied for treatment while suffering with urethral gonorrhœa. After a few days, she began to complain of pain in the rectum, and soon of the typical symptoms of rectal gonorrhœa as described above. The patient also confessed that she frequently had submitted to rectal coitus. The microscopical examination of the anal secretion revealed the presence of numberless gonoccoci of typical form. Their presence continued during the eight months of the patient's stay in the hospital, although the gonoccoci had disappeared from the urethra three months previously. During the patient's life a small portion of the rectal mucous membrane had been excised for the purpose of examination, but the examination was not made until after the patient's death, which occurred a year later from phthisis. The condition of the mucous membrane was found to be as follows: There was a loss of the glands of Lieberkühn, which were replaced by atypical glandular tissue, an infiltration of round cells, reaching the tunica muscularis of the rectum, and especially around the glands of Lieberkühn; there was considerable vascular engorgement, especially in the sub-mucous membrane. The polynuclear round cells were filled with the Neisser diploccocus, and the germ was in the tissues, in the lumen of the glands of of Lieberkühn, and in all parts of the tissues where a loss of substance was evident. The gonoccoci were not found to have penetrated either the muscula mucosa or submucosa, but the infiltration of the round cells reached the tunica muscularis.

In discussing these cases Dr. Frisch writes: "The demonstrated existence of ulcers and atypical glandular growths in chronic rectal gonorrhœa brings into prominence the thought that in all probability those ulcers of the rectum which are neither tubercular nor carcinomatous, rectal gonorrhœa plays a most important rôle. This is very probable when it is remembered that rectal ulcers of an uncertain origin occur almost exclusively among women, and also when the large predominence of rectal gonorrhœa among woman is taken into consideration. Finally, it should also be remembered that the most energetic local treatment with sitz-baths, irrigations with astringents and disinfectants, the insertion of cotton for the absorption of the secretion—in fact such active treatment for a period of six months as was pursued in the case alluded to, may be found wholly unavailing. Whether the use of cauterization or the curette would yield better results, practise only can answer, but it is probable since the gonoccoci only penetrate the superficial portions of the mucous membrane."

THE CONNECTION BETWEEN ARTHRITIC DIATHESIS AND TUBERCULOSIS OF THE LUNGS.

In an exhaustive article in the *Deuteches Archiv für klin Medicin*, Vol. XLVII, Dr. A. Sokolowski has dealt most ably with those forms of tuberculosis of the lungs in which various symptoms of an arthritic nature are manifested, especially renal colic, and gives some valuable points regarding the treatment of the semanifestations. He claims that in the case of a subject with extensive induration of the apex of the lung, where the general condition is excellent, and where the various manifestations of an abdominal plethora exist, that the former condition should be regarded as secondary to the latter, that the therapy should be exclusively applied to the treatment of the latter manifestations, and that these alone should receive the physician's immediate attention. Sokolowsky has found by experience, if the therapy is modified to meet the condition of the lungs, and consists in the exhibition

of slightly alkaline, or saline-alkaline mineral waters, such as Vichy or Ems, the results are by no means satisfactory; while, on the other hand, if the alkaline bitter-waters, Marienbad, or even Karlsbad, are used the results in the large majority of cases are most excellent. Of course, such a course of treatment must be undertaken with a degree of caution, and be controlled by the condition of the urine. The ground work of the further treatment should be based on dietary and hygienic principles and is as follows:

1. DIET.—The author is adverse to the view that albuminoid foods should be withheld from the patient, but accepts Thompson's opinion in that he avoids the use of either fatty or mealy substances. Alcoholic drinks should be restricted as far as possible. It is this latter form of stimulant nourishment that is always given to consumptives, and this is regarded by the author as a frequent cause of artificial diathesis. The amount of nourishment given to the patient should always be guided by the amount of physical exercise. The age of the patient must also be taken into consideration ; the older the individual the less his organism requires. Regarding the articles of diet which should be avoided by the patient the following may be included: milk, milk and water, butter, cheese, egg, cake, mealy foods, and, indeed, all dishes in the preparation of which sugar is used. The following articles, on the other hand, may be partaken of with impunity: Lean meats of various kinds, fish, game, young fowl, well-baked bread in small quantities, rye-bread similarly, vegetables both fresh and dried, but especially fresh peas, beans and the like, as well as fresh salad and asparagus. Regarding potatoes, in spite of the larger quantities of starch they contain, they may be partaken of sparingly. Among fruits, apples and any other which contain only a small amount of sugar may be eaten. Regarding fluid, all spirituous drinks, and especially beer, should be avoided, while pure cold water or slightly alkaline waters, such as seltzer, may be taken as desired, yet a moderate amount of water only should be drunk, this restriction being a most important dietary factor. Water acts as a sort of mechanical rinser of the tissues and especially of the renal canals, and by washing out the uric acid sediments it decreases both the specific gravity and the acidity of the urine.

2. Movement, or exercise, is also a most important dietary factor. The patients should whenever possible take walks in the open air for several hours every day. In bad weather, and with those patients who suffer from bronchial catarrh, suitable gymnastic exercise should be indulged in at home, and necessary apparatus for the same provided.

3. The careful maintenance of a regular action of the bowels is most important. The above diet will usually be found to keep the bowels in order, but when irregularities exist massage should be employed. and from time to time some saline aperient exhibited, bitter-water (Hunyadi) being the best for this purpose.

4. The maintenance of the proper function of the skin is also of great importance. The best means of securing this is to sponge the entire body with tepid water, followed by a brisk rubbing down with a coarse towel. Those patients who cannot endure a cold sponge bath may substitute luke-warm water, but to be followed by a brisk rubbing down sufficient to cause friction of the skin. Steam or Turkish baths are not advisable unless taken with great caution, since in consumptive subjects they are apt to cause hæmoptysis. At best they must be regarded as decidedly risky.

The results of such a hygienic and dietary course of treatment will be marked, and the arthritic manifestations renal colics, arthritic diseases of the joints, or others—will not only be

greatly relieved but may disappear entirely. Surely the method, simple as it is, is worthy of extended trial and investigation.

Book Reviews.

THE ELECTRO-THERAPEUTICS OF GYNÆCOLOGY. By August H Goelet, M. D. Fellow of the New York Academy of Medicine, and of the New York Obstetrical Society; Vice President of the American Electro-Therapeutic Association; Editor of the Archives of Gynæcology, Obstetrics and Pædiatrics. Detroit, Mich: Geo. S. Davis. Two volumes. 1892.

We heartily welcome these two volumes of the Physicians' Leisure Hour Series, in which Dr. Goelet has included the gist of the theories and treatment followed by Apostoli and his disciples, coupled with the results and suggestions of his personal experience.

The American literature on this subject, although abounding in journal articles and society reports, does not furnish any concise and complete work, and to Dr. Goelet is due the credit of amassing a great many useful facts concerning this important branch of gynæcology.

The first volume treats exclusively of electro-physics and electro-physiology, giving good descriptions of the apparatus used clinically. A number of ingenious electrodes and other instruments have been added by the author to those we already possess. The second volume deals with electro-therapeutics; and all of the various gynæcological affections in which electricity is employed are taken up seriatim.

Whatever views the reader may entertain regarding the use of electricity in certain uterine diseases, especially in fibromyomatous growths, this book impartially relates the results obtained by the author and others, and in consideration of the brief time which has elapsed since electricity was lauded by some as the remedy *par excellence* in these conditions, it may be said to be a wholly conservative statement of its real range of usefulness. Notwithstanding the modest preface by the author, this little work shows careful preparation, and will no doubt receive considerable attention from those interested in the advancement of this important field of therapeutics.

Periscope.

THERAPEUTICS.

TREATMENT FOR DANDRUFF.

The *American Soap Journal* commends the treatment suggested by Dr. Shuldhams, which is thus given in the *Lancet*:

The head should be first well washed with hot water and alcoholic soap. The latter is made from 2 ounces of pure soft (potash) soap, ½ ounce of alcohol and 10 minims of oil of lavender. After well rubbing it in the hair wash it away with plenty of hot water and thoroughly dry with a warm soft cloth. When the head is quite dry use a glycerole of tannin (10 to 30 grains to the ounce) and rub firmly into the scalp. If tannin does not seem to aid, resorcin may be used. This is to be done from one to three times a week. The following dressing may be used; Carbolic acid 20 grains, oil of cinnamon 60 grains, olive oil 2 ounces. Apply daily.

EXALGINE POISONING.

A Lockhart Gillespie (Edinburg) communicates notes of a severe case of exalgine poisoning (*Medical Press*, 1892, No. 2758). The patient, aged twenty-three years, took four doses of exalgine (methyl-acetanilide) in the course of the day (about thirty-six graines in all) for the relief of toothache.

When seen about midnight he was lying insensible, with rigid neck and retracted head, widely dilated, sluggish pupils, quiet, deep breathing, and a pulse of 79, of good tension. Soon after he became more sensible and complained of hammering inside the head. Speech was indistinct and he could not move the trunk or limbs voluntarily. Every few minutes there was a convulsion, beginning with "risus sardonicus" and groaning, followed in order by violent rolling of head and neck, spasm of cervical muscles, rigidity of both arms, and spasmodic contractions of abdominal muscles, the legs being barely affected. Tapping the head caused pain and brought on a convulsion, as did pricking the arm.

During the paroxysms the pain over the vertex was almost unbearable. At 1 A. M. ¼ gr. of morphine was injected, cold cloths applied to the head, and an hour later two purgative pills were taken. A little later he became more paralyzed and

the convulsions more frequent. Of superficial and deep reflexes the cremasteric alone could be elicited

The patient still complained of intense headache, inability to see, and total anæsthesia. As the pupils contracted the fits became less frequent. At 4.15 A. M. he was quieter; breathing central, almost Cheyne-Stokes. Pupils contracted, anæsthesia still universal. Urine presented no special features. He had a few spasms of muscles during the earlier part of the day; toward evening the anæsthesia was passing off. The excitement consequent on the visit of some friends determined a slight return of convulsions and anæsthesia during the night. The removal of the offending tooth on the following morning gave rise to a few slight convulsions, after which recovery was rapid. Temperature remained down throughout.—*Amer. Jour. Med. Sci.*

A NEW TREATMENT FOR CHLOROFORM SYNCOPE.

The method of treating cases of chloroform syncope resorted to in the clinique of Prof. Koenig, of Gottingen, is said to have given very good results, and as it is simple enough, it may be worth trying. It consists in applying manual compression over the cardiac region some thirty or forty times a minute, another assistant compressing the thorax as a whole at regular intervals in order to facilitate respiration. The compression is claimed to have for effect to empty the right ventricle, which in these cases is engorged with blood, and thus to bring about a return of the circulation. Prof. Koenig's assistant, Dr. Maas, recommends pressure more frequently repeated, and at much shorter intervals, and by this means he succeeded in reviving two patients who had shown no sign of improvement under the original plan. The operator stands to the left of the patient and presses the thumb deeply at a point midway between the apex beat and the edge of the sternum, repeating the process about 120 times a minute. Almost at once the dilated pupils contact, and the presence of an artificial carotid pulse can be felt. After a time spontaneous respiratory efforts are noticed, which are the signal for discontinuing the pressure and the artificial respiration, so long as the contraction of the pupils is maintained and the respiratory efforts do not again cease. —*Med. Press.*

CONTRARY ACTION OF CERTAIN DRUGS.

Dr. R. Lepine (*La Semaine Médicale*, 1892, No. 4, p. 21) reports an instance where ergot produced a congestion of the face. He prefers to call this an accessory action rather than, strictly speaking, a contrary one. A similar result occurred in a phthisical patient who had received one seven-and-one-half-grain dose of acetanilide, when there was marked perspiration but intense congestion of the face. This is not a paradoxical case, for, indeed, the vaso-dilators are more readily excited, and a small dose can influence these without exciting their antagonists, and in this case with diminished dose the congestion was at its height. In a case of severe acute articular and visceral rheumatism the salicylate of soda apparently caused jaundice due to congestion of the liver, and as well a rise in temperature. He believes that, exceptionally, due to particular conditions of the patient, an antipyretic may be responsible for a rise of temperature.

MEDICINE.

THOMSEN'S DISEASE IN A PARAMYOTONIC FAMILY.

Delprat publishes (*Deutsch. med. Woch.*, No. 8, 1892) two cases of congenital myotone associated with congenital para-myotone—a combination of morbid states that has not previously been described. In both the patients (brothers) the peculiar tonic spasm excited by cold, characteristic of the latter affection, developed in early childhood and involved the muscles of the face and extremities. The generation to which these patients belonged numbered 27 persons, 8 of whom were affected with paramyotone. A similar number suffered in the preceding generation, and 4 out of the 6 individuals who comprised the antecedent generation were subject to the malady. There were good reasons to conjecture that the mother of the 4 persons last mentioned was paramyotonic; assuming that she was, the heredity was continuous in certain lines of her descendants; in no other case was it atavic. The mother of Delprat's patients exhibited a severe degree of the affection before her marriage, but was comparatively free after—a fact which is noteworthy in connection with the well-known effect of pregnancy upon the general circulation. The symptoms

of Thomsen's disease appeared about the age of 15 in one of the patients, at a much earlier age in the other. Eulenburg's "myotonic reaction" was distinctly marked, but there was no tendency to closure tetanus, and a rather strong current was needed to produce minimal contraction. A persistent shortening of the digital flexors was observed; the fingers could be straightened by passive movement, but when in that position hyper-extension of the hand on wrist was impossible. The hyper-extension could only be produced when the fingers were allowed to flex.—*Brit. Med. Jour.*

PURPURA OF THE MUCOUS MEMBRANE OF THE MOUTH, PHARYNX, AND LARYNX.

Audubert (*Annales de la Policlinique de Bordeaux*, 1891, No. 5) has recorded the case of a man, fifty years old, with tuberculosis of the larynx and lungs, in the course of which purpuric spots appeared upon the uvula, the tongue, the gums, and in the larynx and pharynx, but nowhere upon the skin or in the nares. —*Wiener klin. Wochenschr.*, 1891, No. 43, p. 813.

FUNCTIONAL MITRAL DISORDER.

V. de Risi has observed in cases of chlorotic and readily-excitable girls a distinct presystolic murmur which, in a case demonstrated by Professor Senise, showed few interruptions. He formulates a hypothesis, based on an elaborate theoretical study, that the presystolic murmur can only be of mechanical origin, arising from an inorganic functional defect of the auriculo-ventricular orifice, namely, from functional stenosis. For the anatomical basis of this condition he quotes Paladino's anatomical description of the muscular fibres extending from the auricle to the ventricle. De Risi further tries to prove that the systolic heart murmurs which arise in anæmia are a result of malnutrition of the heart muscles, and that they must arise directly from disease of the muscular bands which extend from the ventricle to the valves (tensor apparatus). The disease of these bands causes an irregularity in the closure of the valves in consequence of abdominal contraction of the heart muscles.—*Centrlblt. f. klin. Med.*, No. 23, 1891.

ON PSEUDO-TABES, OR TABES PERIPHERICA.

Dr. H. Higier discusses this disease whose differential diagnosis from true locomotor-ataxia is often very difficult. It is due to a form of multiple-neuritis in which the sensory sphere is most involved. He suggests that all tabes reported recovered be treated with suspicion unless it be clearly proven that they are not cases of pseudo-tabes. The ætiology is tolerably clear. It is either toxic (lead, arsenic, alcohol, etc.) or toxæmic (diphtheria, variola, typhoid) ,or rheumatic (catching cold) in character. The ataxic walk comes on earlier in peripheral than in true tabes. In alcoholic tabes muscular atrophy begins early, as well as the electrical changes. The presence of R. D. speaks against true tabes, although the electrical condition is extremely variable in pseudo-tabes. The absence or presence of the patellar reflex is not of value in the differential diagnosis. Optic neuritis, if present, speaks strongly for a peripheral origin. The Argyle-Robertson symptom never occurs in pseudo-tabes, although opthalmoplegia does sometimes occur. The Romberg symptom occurs in both forms. The absence of vesical and rectal disturbances, of the girdle sensation, and of the gastric and laryngeal crises, all have a certain value in differential diagnosis. He then relates the histories of three cases of pseudo-tabes of rheumatic origin (catching cold), all of which showed considerable improvement under appropriate treatment.—*Deutsche Medic. Wochensch.*, No. 34, 1891.

SURGERY.

TREATMENT OF TRACHOMA.

W. F. Strangways (*Ophthalmic Record*, April, 1892) doubts the value of excision of the retrotarsal folds, through scarification of the conjunctiva, and then scrubbing it with a solution of bichloride of mercury, and other violent forms of operative procedure which have been advocated in the management of chronic trachoma. He strongly advocates the method, originally devised by Dr. Hotz, of crushing the follicles between the thumb-nails. It is very important that there should be proper exposure of the surface, and for this purpose it is advised that the

lid should be everted in the usual way; then the everted lid should be drawn upward with one thumb, while the other exercises firm backward pressure on the eye through the lower lid. The patient should be directed to look downward. As the eye is pressed backward the fold everts.—*Ther. Gaz.*

EXTIRPATION OF THE LARYNX.

The number of cases in which the operation of removal of the entire larynx has been successfully performed is gradually increasing. The latest of these was recorded by Professor Wolff at the recent session of the Surgical Congress at Berlin, where the patient was exhibited eight months after the operation. The interest of the case is enhanced by the fact that by means of an artificial larynx, invented by Professor Bruns, the patient is able to speak and sing, as illustrated before the Congress by his recitation of a monologue from Schiller's "William Tell" and his singing of "Gaudeamus igitur."—*Lancet.*

INTESTINAL OBSTRUCTION FROM GALL-STONE.

This subject has been discussed by Mr. Jonathan Hutchinson, who points out that in many cases the obstruction must come about reflexly, probably from spasm, as the size of the stone precludes the idea of a mechanical stoppage. Dr. James Israel relates a case of ileus very closely allied to Mr. Hutchinson's case. The stone removed was a small one—not more than three-quarters of an inch in the greatest diameter, so that it was impossible it would prevent the passage of gas and fluids in a distensible bowel. The patient was a lady 72 years of age, who suffered from constipation and colic of seven days' duration and severe vomiting of black material for four days, recurring every few minutes. The abdomen was soft, not actually distended, and without a trace of visible peristalsis. On laparotomy, there was found a stone in the jejunum. The intestines showed no sign of movement. The small intestine above the stone was not in the least distended; the large intestines were empty. The stone could be readily moved in either direction, so that a mechanical occlusion was out of the question. Israel hesitated at first to look upon this as the cause of trouble, and examined in vain the whole intestines. The stone was excised and the bowel opening stitched to the abdominal wound. The cessation of the dark vomit and the passage next morning of a copious stool showed that the obstruction had been removed. Unfortunately the patient died very suddenly thirty hours later of angina pectoris, from which she had previously suffered.—*Berlin. klin. Wochenschr.*, No. 1, 1892.

THE OBJECTIONS TO THE INSERTION OF DRAINAGE-TUBES INTO WOUNDS.

In the *Maryland Medical Journal* for November 14, 1891, Professor William H. Welch summed up the objections to the inserting of drainage-tubes into wounds as follows: First, they tend to remove bacteria, which may get into a wound, from the bactericidal influence of the tissues and and animal juices. Second, bacteria may travel by continuous growth or in other ways down the sides of a drainage-tube and so penetrate into a wound which they otherwise would not enter. He has repeatedly been able to demonstrate this mode of entrance of the white staphylococcus found so commonly in the epidermis. The danger of leaving any part of a drainage-tube exposed to air is too evident to require mention. Third, the changing of dressing necessitated by the presence of drainage-tubes increases in proportion to its frequency the chances of accidental infection. Fourth, the drainage-tube keeps asunder tissues which might otherwise immediately unite. Fifth, its presence as a foreign body is an irritant and increases exudation. Sixth, the withdrawal of tubes left any considerable time in wounds breaks up forming granulations and thus both prolongs the process of repair and opens the way for infection. Granulation tissue is an obstacle to the invasion of pathogenic bacteria from the surface, it has been proved by experiment. Seventh, after removal of the tube there is left a tract prone to suppurate and often slow in healing. To these Dr. Halsted adds an eighth: Tissues which have been exposed to the drainage-tube are suffering from an insult which more or less impairs their vitality and hence their ability to destroy or inhibit micro-organisms.

PROSTATECTOMY.

Dr. Tobin (*Medical Press and Circular* December 2, 1891) has successfully practiced an operation for senile prostatic enlargement, which consists in first making a suprapubic incision. A wire doubled and suitably curved is then passed through the urethra into the bladder. A straight sound arranged to receive the wire is then passed till it impinges against the urethral obstruction. The wire loop lying in the bladder is then slipped over the enlarged lobe by means of one or two fingers passed through the suprapubic opening, and while held in place traction is made until it cuts its way through, aided by the counter-pressure of the sound. The following advantages are claimed for this method:

1. As much of the gland as interferes with the escape of urine is removed and no more. 4. Such portion of it is removed in a satisfactory manner, for the wire starts from the point where the finger defines the obstruction on one side, and cuts up to the point where the instrument does so on the other. 3. A smooth surface, sloping into the urethra, is left, instead of the more or less rough one, that must result from taking away the gland piecemeal with a forceps. 4. There is very little hæmorrhage. No brilliant results are to be expected from any operation, and one should be undertaken only as a last resource. When dealing with youth we may talk of a cure; when treating the aged we may consider ourselves lucky if we succeed in making them a little better.

OBSTETRICS.

TWO EXTRAUTERINE PREGNANCIES IN THE SAME SUBJECT.

Boisleux (*Nouvelles Arch d'Obèst. et de Gynéc.*, May, 1892) observed a case where tubal pregnancy at the third month was diagnosed, and six days later there were clear symptoms of ruptured tube. An operation was immediately performed. On opening the abdominal cavity, a jet of blood gushed out: the fœtal sack was secured. Seven weeks later the patient was again found to be the subject of extrauterine pregnancy. There was a hæmatoma on the left side which rapidly grew large. A second abdominal section was performed. There were intestinal adhesions, and no pedicle could be found, as the fœtal sack was deeply situated in the left broad ligament. No ligature could be applied, but the cavity was plugged. When the bleeding was checked, a second plug was applied, and left twenty-eight hours in place, projecting above through the abdominal wound. A T-drainage-tube was inserted into the sac through the vagina. In April, 1892, the patient, aged 19, was in good health. Boisleux found chorionic villi and decidual cells in both fœtal sacs.—*Brit. Med. Jour.*

PARASITIC FŒTUS.

Leon (*Archives de Tocologie*, February, 1892) reports a curious case of double monster of the parasitic variety. The patient, a girl 3 years of age, was the daughter of native Mexican parents. She exhibited on the left gluteal region some well-marked portions of a fœtal face. These were the upper and lower eyelids of the left eye with eyelashes and eyebrows, an upper lip which perfectly covered a part of a rudimentary upper-jaw furnished with three or four well-developed incisor teeth, and a small buccal cavity with a rudimentary tongue and some fluid secretion. When the eyelids were separated a red surface analogous to the conjunctiva was exposed. Near to the groove between the buttocks was a row of silky hairs, and quite close to the base of the implantation of the upper lip was a small superficial opening. In the inferior part of the cyst the presence of fluid was detected, and on the surface of the parts were seen some mammillary projections.—*Brit. Med. Jour.*.

UNCONTROLLABLE VOMITING IN A PREGNANT WOMAN AT THE FOURTH MONTH TREATED BY SUGGESTION—CURE.

Choteau (*Archives de Tocologie et de Gynecologie*, April, 1892,) was called to see a woman living in a neighboring village suffering from repeated vomiting of pregnancy. She was 24 years old; puberty had occurred at 18; pregnant, at fourth month: she had had no previous illness. She commenced to vomit with the beginning of her pregnancy and was growing worse at this period. The vomited matter contained blood in great abundance. She was greatly

exhausted. Her skin was earthy, eyes sunken, pulse 120, temperature 38C°, urine scanty, non-albuminous. The ingestion, even the sight of a portion of food, or of a little water, would provoke painful, bloody vomiting. Nothing abnormal was found in the body of the uterus or its adnexa. The usual remedies were tried and failed. Before the adoption of extreme means, Choteau conceived the idea of employing suggestion. She was easily put to sleep by bi-ocular pressure, and the idea of cure suggested to her. She was told she could not vomit and ordered to eat and drink when she awoke.

The third day she was again made to sleep, and the idea of complete cure was suggested. From that time there was complete cessation of vomiting for fifteen days. Between the fifth month of pregnancy and labor some vomiting occurred now and then, but without gravity. The patient recovered her strength and was delivered at term of a vigorous child.—*Univ. Med. Mag.*

GYNECOLOGY.

THE ELECTRICAL TREATMENT OF ENDOMETRITIS.

Mandl and Winter (*Wiener klin Wochenschrift*, 1891, No. 52) report forty-four cases treated by intra-uterine galvanization. The anode was applied to the interior of the uterus, a current of from fifty to one hundred milliampères being used for five minutes. Two or three séances were sufficient to entirely control menorrhagia. If two periods passed without the former profuse flow the patient was regarded as cured, and was not treated further, but if no change was observed the applications were repeated several times at intervals of a few days. In cases of endometritis complicated by peri- and parametritis and disease of the adnexa the cathode was also applied for the purpose of relieving pain and causing absorption of inflammatory exudates. The tension faradic current was also found to be valuable as an analgesic. Twenty-two patients, who were under observation from three to eighteen months, were cured. In fourteen cases there was chronic disease of the adnexa and peri-uterine tissues, but recurrence of the inflammation was noted in only a single instance. The advantages claimed for the treatment are: 1. It can be safely practised at the office, an anæsthetic being unnecessary. 2. With a current of moderate strength applied for a short time the entire endometrium is cauterized to a sufficient depth to promote granulation and restoration of healthy tissue, without the cicatrization observed after the use of strong currents, or of acid escharotics.—*Amer. Jour. Med. Sci.*

PESSARY WORN THIRTEEN YEARS.

D. T. Nelson (*Amer. Jour. Obstet.*, January, 1892) exhibited last summer before the Gynæcological Society of Chicago a pessary which had been worn for thirteen years. The patient was a widow, aged 69, and the pessary had been introduced for falling of the womb. There had been a bloody discharge from the vulva for two years, during which period she had used warm water douches. For the eleven previous years she had employed nothing but ordinary soap and water for external bathing. The pessary was a "Hodge" of the open, horseshoe variety. When removed, the right-hand angle of the horseshoe was behind the sphincter of the vagina, embedded in the mucous membrane, and the right limb of the instrument presented in the vulva. The left limb was just anterior to the cervix and sunk in the mucous membrane; by pressure and ulceration it had passed through the muscular structure of the vagina, and was so firmly fixed that it could not be extracted without force. Nelson stated that he had disinfected the fœtid instrument with a preparation sold under the name of sulpho-naphthol, apparently a form of creolin, but only half the cost of the compound so called. It had completely removed the bad smell.—*Brit. Med. Jour.*

PORRO'S OPERATION FOR PELVIC CONTRACTION DUE TO OSTEO-MALACIA.

After mentioning the indications for Porro's operations Everke, of Bochum, (*Deutch. med. Woch.*, January 28th, 1892) says that osteo-malacia is the most frequent and important of such indications. He relates the following successful case. After the sixth pregnancy, five years previously, the patient had pains in her limbs and difficulty in getting about. These symptoms became worse during the seventh pregnancy, the latter half of which she had to spend in bed. The labor was tedious,

but otherwise normal. She kept her bed during the whole of the eighth pregnancy, at the end of which the pelvis presented the characteristic deformities. Porro's operation was then performed. The pains gradually diminished and in five months she could walk without assistance. In one year and a quarter she could go long distances without inconvenience. The author says that this case shows that the operation should be performed (at the time of labor), and that it is to be preferred to Cæsarean section with oöphorectomy, since (1) there is no object in leaving the uterus; (2) three wounded surfaces are left in the abdomen in the latter case, and (3) there is no fear of hæmorrhage if the uterus be removed. The question of treating the stump is then discussed, the author preferring the extraperitoneal method.—*Brit. Med. Jour.*

PEDIATRICS.

THE TREATMENT OF CHOREA IN THE HOSPITALS OF PARIS.

Marcel Beaudoin (*Revue de Therapeutique Medico-Chirurgical*, April 1, 1892), after consulting the physicians of the hospitals of Paris, publishes the different opinions expressed regarding the treatment of chorea.

In ordinary cases, See recommends antiyprin and arsenic as the best remedies. In rheumatic cases, the salicylate of sodium, according to this author, should be associated with the antipyrin and sulphur baths. In cardiac choreas, to the heart remedies should be added the administration of iodide of potassium, and especially the iodide of calcium.

Gilbert Ballet believes that common chorea tends to a spontaneous cure, and that, therefore, all disturbing medication should be withheld. He condemns antipyrin, but recommends arsenic (Fowler's solution in small doses, that is, from six to twelve drops a day, according to the age of the patient), tonics and iron in anæmic cases. In serious cases he advocates the local application of ether to the vertebral column, and the bromides in patients laboring under psychical troubles. Above all, the author advises hygiene, a good alimentation, and walking in the open air, avoiding fatigue.

According to Dejerine all special medication in infantile chorea is useless. He recommends tonics, massage, gymnastic exercises, dry frictions, salt-baths, and particularly insists on the application of good hygienic measures.

In mild cases, Joffroy attaches particular importance to allowing children to sleep as long as possible: in such instances he is wont to employ daily doses of from 1 to 1.75 grammes of chloral, according to the age of the patient. Fatigue, as well as all physical and mental excitement, should be avoided. In serious cases he believes that antipyrin is useless, and he then resorts to the application twice a day of wet cloths.

Antipyrin has given the best results in the hands of Albert Robin. He combines this drug with bicarbonate of sodium, and gives it in as high a dose as two grammes a day. After fifteen days' use the antipyrin is substituted by the arseniate of sodium in doses of two teaspoonfuls a day, of a solution of five centigrammes to 300 grammes of water. This solution finished, is followed by the re-administration of the antipyrin.

Raymond thinks that only two remedies are to be relied upon in the treatment of chorea; chloral and antipyrin; he has seen acetanilid do good in some cases.

Sevestre believes in the use of both antipyrin and arsenic. The first medicament is administered in doses of from one to two grammes, and even three and four grammes a day. He employs, at the same time, Fowler's solution in daily amounts of from six to twelve drops, or a solution of the arseniate of sodium (five centigrammes in 250 grammes of water) in doses of two to three dessertspoonfuls a day.

Massage, according to Ollivier, has given satisfaction in the treatment of choreic patients. This author also prescribes, as a general medication, iron, arsenic and hydrotherapy.

D'Heilly recommends hygienic measures, tonics and prolonged sleep. In slight cases he thinks that such remedies as arsenic, iron, bitters and baths are sufficient. In more serious cases he resorts to antipyrin and chloral as the best drugs.

Antipyrin is likewise highly recommended by Legroux in doses of four grammes per day. In hysterical cases the bromides and cold douches have given him the best results.

Comby insists on the application, *firstly*, of a moral and physical hygiene; *secondly*, in the sedation of the system by bromide of potassium, in daily doses of from two to four grammes, and the use of cold douches. If no amelioration follows this treatment, antipyrin, in daily amounts of from two to three grammes, should be resorted to.

Jules Simon gives the following points: (1) During the first fifteen days the child is to lie in bed, and revulsion applied over the upper part of the back, by warm frictions, mustard plasters or dry cupping, and the use of aconite and hemlock. (2) After this time, the child is made to get up, and then antipyrin should be administered in progressive doses of one, two, three, four and five grammes in the course of the twenty-four hours; this medicament to be continued for several weeks. (3) This period, especially when the movements are sluggish, should be followed by rhythmical gymnastics. The same author prescribes, at the same time, the least exciting tonics, auch as salt-baths, dry frictions, etc.; but a stay at the seaside is condemned.—*Univ. Med. Mag.*

HYGIENE.

HOW LONG SHOULD A CONVALESCENT FROM DIPHTHERIA BE ISOLATED?

Prince (*Boston M. and S. Journ.*, 1891, cxxv., 691.) writes of a case, the patient was supposed to be well, and made a visit to a relative in Boston nine days from the date of his "getting up." One week after his arrival a child in the family was attacked with diphtheria and died. An outbreak of diphtheria in a hotel at Nantucket followed the arrival of a person just recovered from diphtheria and pronounced well by the attending physician. One of these cases, when supposed to be well, carried it to a hotel in town. Three cases of diphtheria in one family, closely followed the advent of a nurse who had just come from attendance on a fatal case.

I think that evidence goes to show that poison is retained in the mucous membrane longer than is generally considered to be the case. In lieu of definite knowledge I have adopted the arbitrary rule of advising quarantine precautions for one week after the patient appears to be perfectly free from disease. This seems to be a fairly safe rule and one that is desirable.

EXPERIMENTAL RESEARCHES ON THE TRANSMISSION OF CANCER.

After a series of experiments on various animals Duplay(*Gazette des Hopitaux*,No. 23.), draws the following conclusions:—(1) Cancerous neoplasms are not transmissible from man to animals; (2) contrary to what was expected from the results of other experimenters, only negative results were obtained as to the transmission of cancer from one animal to another of the same species, after a lapse of time varying from three to eight months; still until more experiments have been made, and under more favorable conditions,no definite conclusion is arrived at; (3) cancer is not transmissible from one animal to another of a different species; (4) the results do not permit the denial of its parasitic nature, whilst at the same time they do not enable the author to affirm it. This question remains, then, undecided.

A NEW METHOD FOR THE DETECTION OF TUBERCLE BACILLI IN MILK.

Ilkewitch (*Muncher medicinische Wochenschrift*, February 2, 1892) describes a new method for the detection of tubercle bacilli in milk, which is founded on the fact that tubercle bacilli will be precipitated by rapid centrifugal motion. He uses a modified lactocrit, which has 3,600 revolutions a minute. Twenty ccm.of milk are coagulated by means of dilute citric acid, The whey is separated by filtration. The casein is dissolved with phosphate of soda solution. To this are added six ccm. of sulphuric ether, mixed with water, in order that the emulsified fat corpuscles may be set free. The action of the ether is hastened by shaking the mixture in a glass cylinder for fifteen minutes. The solution is allowed to stand, and after the fat has separated, the remainder of the liquid is allowed to run out. Dilute acetic acid is added to this until the first sign of coagulation. It is then transferred to the lactocrit, and the machine set in motion for fifteen minutes. The vast majority of the bacilli then sink to the bottom. This deposit is then conveyed to two slides, stained and examined with an oil immersion. If bacilli were present in the milk they will be found almost surely in this precipitate. The author considers this method more certain than the inoculation of animals with the suspected milk.—*Univ. Med. Mag.*

MEDICAL CHEMISTRY.

LÉVOISNE.

M. Tanret (*Rèpertoire de Pharmacie*, No. 8) has succeeded in isolating a new hydro-carbon, lèvoisne, from cereals. He experimented successfully on rye, barley, and oats. To "lèvoisne" M. Tanret has given the formula C_{48} H_{40} O_{40}, the same formula as amidon and dextrine. It turns the plane of polarized light to the left, hence the name; it is of a white color, amorphous, insipid, soluble in water, very soluble in dilute alcohol, sparingly so in the strong liquid. It does not reduce copper and is not affected by alkaline solutions.

ESTIMATION OF SMALL QUANTITIES OF STRYCHNINE.

At a meeting of the Chemists' Assistants' Association, held at London on March 17th, Mr. R. H. Davies presented a modification of the old method of testing for strychnine with potassium bichromate and sulphuric acid, which had been first worked some years previously by the lecturer, in conjunction with Mr. Oscar Echenstein, for estimating minute quantities of strychnine. Mr. Davies described the usual method of applying the test on a white slab, treating the bichromate and strychnine separately with sulphuric acid, and then drawing the two together, when the characteristic play of colors is produced. A more efficient method, as he demonstarted, is to make a very dilute solution of potassium bichromate in strong sulphuric acid, and then add the strychnine in solution to this in a test tube, when the reaction can be easily observed. The first colors produced soon disappear, giving place to a reddish-orange which is fairly persistent; and it was by means of this color they endeavored to estimate the quantity of strychnine under examination by a process similar to Nesslerizing. Mr. Davies showed a series of these tests, comprising the plain solution of bichromate in strong sulphuric acid, and similar quantities of the solution with $\frac{1}{2500}$, $\frac{1}{1000}$, and $\frac{1}{500}$ gr. of strychnine added. A very distinct difference between them was observable, and it was evident that it was quite practicable, by comparing with a solution of strychnine of known strength, to get an approximate idea of the amount of the alkaloid present.—After *Chem. and Drugg.*

NEWS AND MISCELLANY.

DOCTORS OF PHARMACY.

The University of Munich has created a new degree—Doctor of Pharmacy—which will be granted after a course of seven semesters and examination in one principal subject, chemistry or botany, and in three secondary subjects, namely: mineralogy, physics, and zoology. An inaugural dissertation must also be presented.

RECTAL MUSIC.

The members of the Surgical Congress which has just risen at Paris were invited to witness the performances of a "physiological curiosity," in the person of a man who rejoices in the ability to aspirate large quantities of air or water *per rectum.* Seated in a hip-bath he can by a voluntary effort draw two or three quarts of water into the large intestine, and some idea of the muscular strength called into play is afforded by the fact that this fluid can be ejected to a distance of from five to seven yards as the crow flies. A close examination of the "subject" showed that the aspiration is performed in the following way:—The diaphragm being fixed by a deep inspiration, the glottis is closed, and all the extraordinary muscles are called into play. This produces a dilatation of the lower part of the thorax. At this moment the epigastric region yields to the pressure of the external air and becomes markedly concave, the iliac fossæ following suit. The condition of negative pressure thus created causes an inrush of air through the anus, the aspiratory effect being carried a step further by the action of the diaphragm on the lower ribs, which are pulled upwards and outwards. The man first discovered his peculiar talent when a lad, his attention having been called to it by the involuntary passage into the intestines of large quantities of seawater when bathing. Since then he has cultivated it, and for some years past has made—not exactly a decent, but an ample livelihood, by rendering musical airs at various places of public amusement in the Modern Babylon. To the astonishment of the surgeons he imitated a number of musical instruments—the trombone, the human bass voice (non-articulate) the violin, &c., and with sufficient talent and accuracy to render the selection of airs perfectly recognizable.—*Med. Press.*

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THE
MEDICAL AND SURGICAL REPORTER.

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Clinical Lectures.

CLINICAL REPORT OF CYSTECTOMY FOR POLYCYSTIC OVARIAN TUMOR.

By PROF. HOWARD A. KELLY,
AT THE JOHNS HOPKINS HOSPITAL.

(Reported by J. G. Wiltshire, M. D., of Baltimore.)

Gentlemen:—I bring before the clinic for examination to-day the case of Miss A., white, aged 21, single. She menstruated first at seventeen and was always regular in her habit, having a moderate flow lasting four days with but little pain up to her last period, Sept. 1st, 1891. Since then in place of menstruation, she has had a somewhat offensive leucorrhœa. She has been sent to me for treatment by Dr. S. Birnie, of Taneytown, Pa., and Dr. Simpson, of Harney, Md. About Jan. 1st, 1892, two months ago, her physicians had their attention called to a supposed tumor in her left iliac region, although she had noticed some enlargement in November. The abdomen grew rapidly, with sharp pains at first, until it attained its present large proportions. She says that she was feverish at first as it was growing; emaciation of the body kept pace in inverse proportion with this growth of the tumor and the increasing girth of the abdomen.

She now comes before you for a critical examination under ether. The note tells us further that her bowels are regular and there is no urinary trouble. She has never had any serious illness, and her family history is negative. Upon making a general inspection you will observe at once that her face is anæmic, thin, haggard, and drawn, bearing evidences of profound nutritive disturbance, there is also a peculiar pallor of a greenish yellow cast—a species of cachexia, suggestive at first sight of malignant disease lurking in some part of the body. Her expression, however, is more that which has been termed *facies ovariana*, the emaciation indicative of advanced ovarian disease. The pulse is slow and feeble. The respiration as you see is superior-costal, owing to the compression made upon the alate lower chest by the swelled abdomen.

Closer examination reveals no disease of the chest. There is no œdema anywhere.

Upon inspecting the abdomen, we find it greatly distended, ovoid in form, remarkably smooth on its surface, somewhat larger on the left than on the right side. The umbilicus is pressed out even with the surface, and is distant 21 cm. from the symphysis, and the same from the ensiform cartilage. When there is much free fluid in an abdomen as large as this the umbilicus is prone to be elevated much above the surface forming a slight hernia. We thus record in passing, a point against this tumor being an ascitic accumulation.

Observe closely and you will catch sight of a peculiar little wave constantly playing over the surface; this is not respiratory, it is cardiac in its rhythm, aortic in time; it is an important sign tending to show that something more or less tense or solid rests directly upon the aorta, filling up the space between the aorta and the anterior abdominal wall, for only in this way could the aortic pulsation be so clearly transmitted. It is really a percussion wave from behind. This also tends to demonstrate that the enlargement in our patient is not free fluid, but is either solid or enclosed in a tense sac.

Percussion reveals a corona of high pitched resonance over the upper surface of the tumor which I thus outline with an aniline pencil. The line thus made you

see is curved, lying just below and parallel to the ribs, with its convexity turned up, and its concavity looking towards the symphysis pubis. I first introduced this graphic method of demonstrating and studying various intra-abdominal and intra-thoracic diseases ten years ago when a resident at the Episcopal Hospital, Philadelphia, and have found it of great value, particularly when left on four or five days, in mapping out effusions or swellings which may change their outline from day to day. As I now proceed to percuss over the tumor (?) and on all sides, you note that while the vaulted prominence itself is absolutely flat, it is surrounded on three sides, the upper and the two lateral, above and in both groins, by a peculiar tympanitic note belonging to the colon. The whole inferior zone however on the pelvic side, is again absolutely flat.

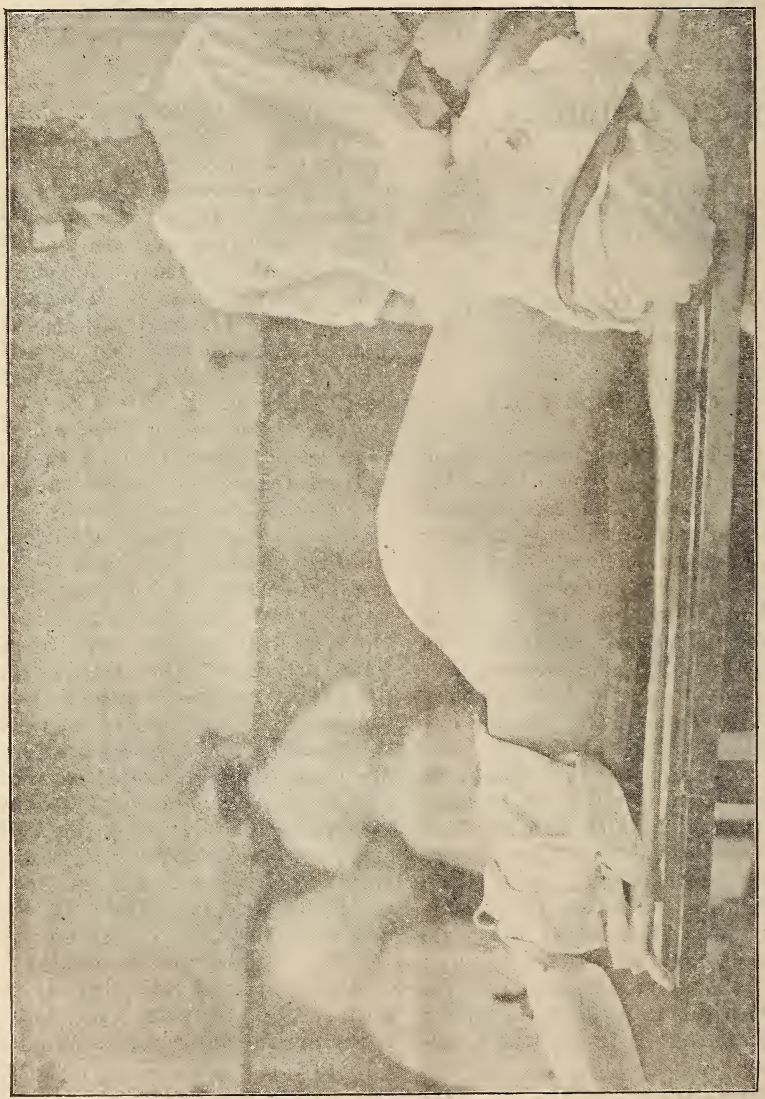

Fig. 1.—Patient on the operating table. A side view of a smaller ovarian cyst, weighing twelve or fifteen pounds, showing its characteristic contour, not unlike that of a uterus in the seventh or eighth month of pregnancy.

This peculiar circumscription in an area of dullness, having its base or point of origin as it were below, indicates a more or less coherent foreign mass in the abdominal cavity; the continuance of the dull percussion note downwards without the intervention of any area of tympany as

above, indicates an organic connection with the pelvic organs and at once suggests the pelvic origin of a tumor.

Aside from this direct evidence that we are thus dealing with a pelvic tumor, we we will make our demonstration clearer if we also seek evidence by exclusion, that is by percussing out the various important solid viscera, when if we find them all "at home" so to speak, we will feel more than ever assured as to the pelvic origin of our tumor.

You now note above the tympanitic zone, in the median line my strokes demonstrate an area of peculiar tympanitic dullness. What can it be? By continuing the percussion over towards the right hypochondrium you observe that this note gradually shades off step by step by the finest gradations of sound into the absolute dullness of the liver, showing by this continuity that the "tympanitic dull" area marks the location of the left lobe of the liver.

The spleen also is easily demonstrated near its normal site, and the tympanitic flanks exclude the kidneys from participation in the disease.

We thus again by exclusion reach the

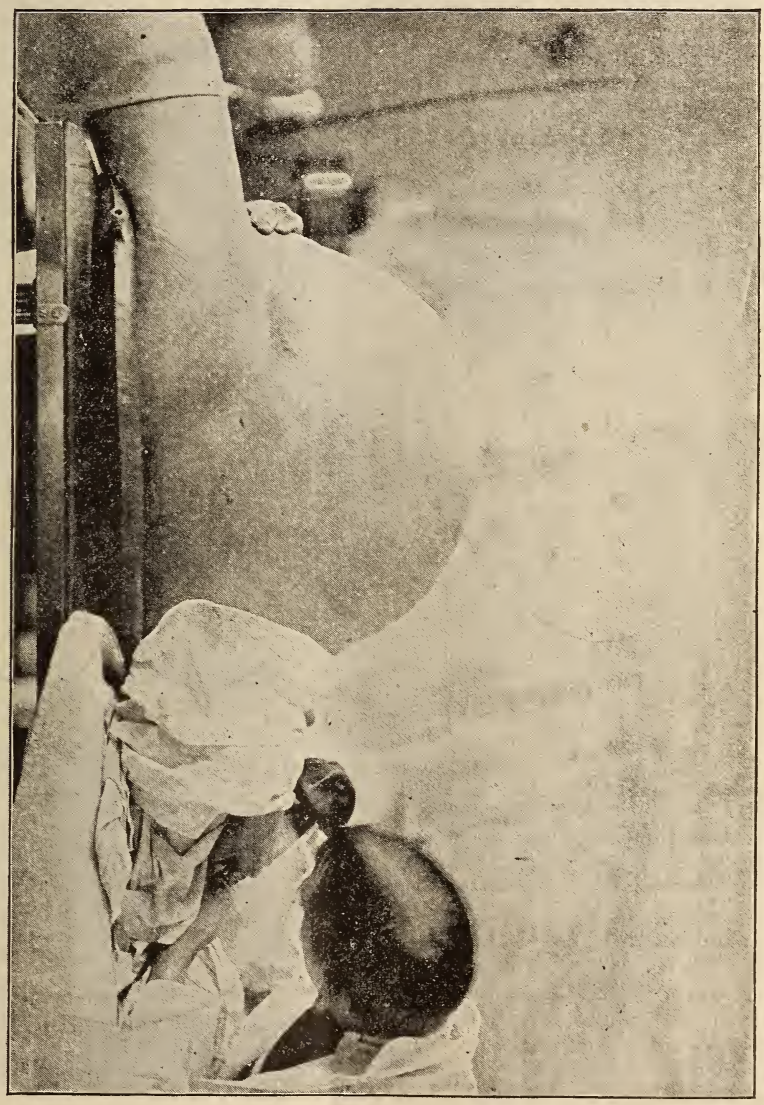

Fig. 2.—The photographic side view of a similar large ovarian cyst, showing the marked spherical distension of the abdomen due to the presence of a large sac distended with fluid.

conclusion that this is a pelvic tumor and the area of resonance surrounding it is the *corona uterina* or *ovariana* characteristic of a uterine or ovarian tumor.

Palpation shows that we are dealing with a homogeneous fluctuating mass, with no bosses or irregularities on its abdominal surface.

Per vaginam: The vagina is lax and the small cervix depressed towards the pelvic floor; the pelvis is distended with an elastic cyst filling the retro-uterine pouch, fuller on the right side. The pelvic organs are thus displaced downwards on the floor by

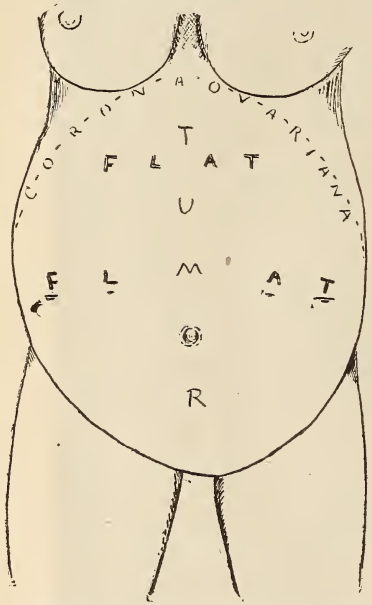

Fig. 3. The distended ovoid belly of the patient. The tumor occupies about all the small circular area outlined. Above is the *corona ovariana*, here the tympanitic note of the displaced intestines appears distinctly on percussion. The areas marked "Flat" occupy the whole of the abdomen below the *corona*, and demonstrate the presence of the large tumor immediately beneath the abdominal walls.

the superincumbent weight of the tumor. The body of the uterus is anteflexed and tilted over into the left flank, and rests upon Poupart's ligament. I feel also a small boss posteriorly which may be a displaced ovary.

Per rectum: Palpation by this avenue further confirms the diagnosis which is forming as to the character of the tumor.

We have to deal with a cystic, ovarian tumor, of rapid growth probably of an adenoid or papillary nature. Its point of departure is from the left broad ligament as shown by the fact that the uterus is drawn over to the left side. In small tumors a reverse displacement is the rule. This appears also to be either a mono-

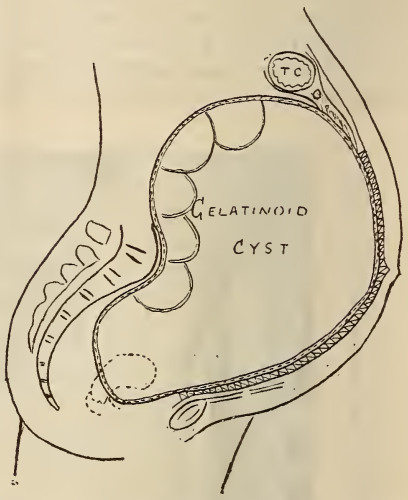

Fig. 4.—A sagittal section through the tumor described in the paper. "T. C." is the transverse colon above, immediately below this "o" the omentum, is intimately adherent to the cyst wall. From the omentum down to the symphysis the cyst is seen to be adherent to the anterior abdominal wall. In the posterior part of the cyst are seen a number of small daughter cysts. The uterus is seen outlined low down in the pelvis and anteflexed.

cystic tumor or a tumor with one large and a number of smaller cysts.

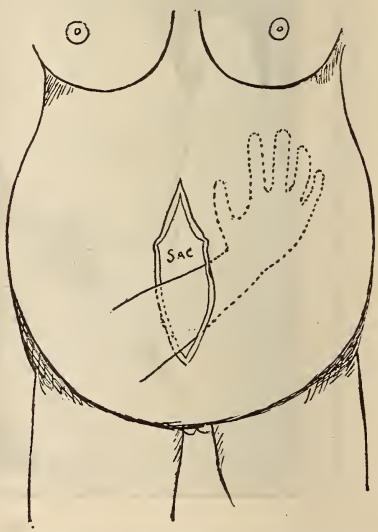

Fig. 5.—The incision extending through the umbilicus. The sac is seen through the gaping edges of the incision. The right hand of the operator is introduced between the sac wall and the parietal peritoneum, by opening and closing the fingers and pushing the hand along the tumor is being stripped loose from its adhesions.

Monocysts in general are of two kinds, *ovarian* and *parovarian*. The latter of

slower growth, contain a limpid fluid and if tapped or accidentally ruptured the fluid sometimes does not re-accumulate, in this simple way establishing a cure.

nature by the general effect on the nutrition as well as by an overgrowth on the surrounding tissues. Their rapid growth is often accompanied by a most marked

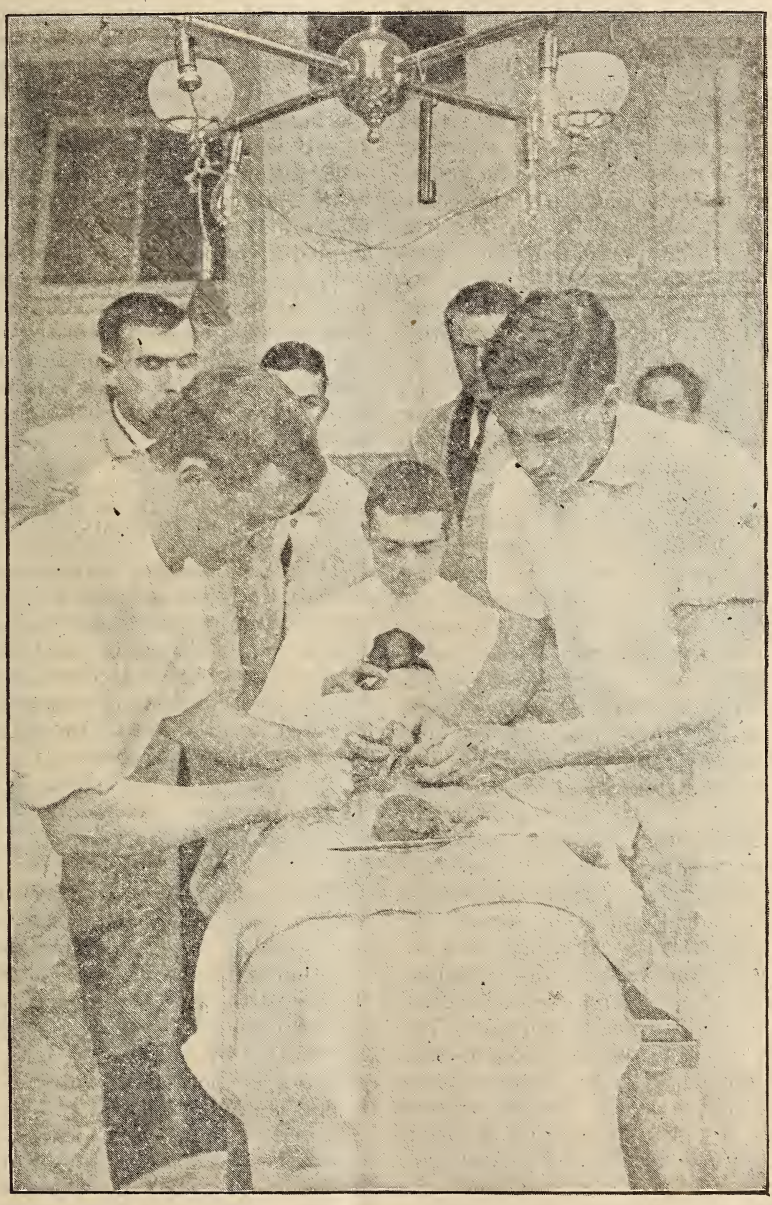

Fig. 6.—Grouping at an operation. The operator, his chief assistant, the anæsthetizer, and some visitors grouped about the operating table. A small ovarian tumor is being lifted out of the abdominal incision, which the assistant is holding open with a retractor, while the operator is engaged in transfixing the pedicle preparatory to ligation and removal.

The ovarian cases spring from the base or stroma of the ovary, and often contain adenoid and papillary masses, growing rapidly and evincing their malignant cachexia. This may be a tumor of this class.

Nothing, however, but the operation itself—cœliotomy—can settle this finer

question positively, to the advantage or disadvantage of the patient.

Operation, Monday, February 29th, 1892, under ether anæsthesia. The bowels had been regulated, the diet restricted, and the urine carefully examined, and the abdomen prepared by daily washings in the ward. It was again, however, thoroughly cleaned on the operating table with soap and water, ether and alcohol. The field of operation was then covered with a wide piece of aseptic gauze, and sterilized towels laid above and below the chest and thighs. A slit in the gauze exposed that portion of the abdomen which was to be opened for the removal of the tumor. An incision 10 cm. in length [4 in.] was made in the median line below the umbilicus, disclosing at once the glistening wall of a large ovarian tumor. On attempting to tap the tumor no fluid flowed. The cyst was filled with a tenacious gelatinoid mass. It was therefore necessary to enlarge the incision until it extended above the umbilicus. The wall of the tumor being everywhere adherent to the abdominal wall, these adhesions were rapidly broken up by passing the hand in between the cyst and the abdominal wall, using the fingers with a shearing movement. A large part of the omentum which was closely adherent to the tumor was removed and its vessels controlled by six ligatures. The tumor was then lifted out of the abdomen *en masse*. Its pedicle sprung from the left side where it was very broad, requiring eight ligatures to tie it off.

The abdomen was thoroughly washed out with 4 litres [4 quarts] of normal salt solution. An actively bleeding area on the anterior abdominal wall was controlled by a circular suture introduced all around the margin and drawn tight and tied. The right ovary and tube were free from disease.

After removing all water from the abdomen the incision was closed without drainage. A continuous suture of catgut was used to unite the divided peritoneum, and silk-worm gut to bring together the skin, muscles and fascia. The duration of the operation was a half hour.

Convalescence was rapid and satisfactory. The temperature went up to 100½° on the second day, and varied from 98° to 100° up to the tenth day. The pulse after the first day ranged between 84 and 96, but with an elevation of temperature to 101° on the tenth day due to suppuration in the incision the pulse also went up to 112.

A slight stitch-hole abscess was noticed on the seventh day, from this pure cultures of staphylococcus aureus were obtained.

On the twentieth day a marked induration was noticed around the lower part of the wound, followed immediately by a free discharge of pus. This was entirely healed in six days.

A letter from her physician received more than two months after the operation states that she is perfectly well, and occupied in doing light house work.

[I have felt an interest in reporting this case, as exhibiting the simple and satisfactory technique of these operations at the Johns Hopkins Hospital, the operation being one of a long series I have witnessed there from week to week for two years past.—J. G. W.]

CINNAMIC ACID IN SURGICAL TUBERCULOSIS.

Dr. A. Landerer has employed this remedy in 45 cases, of which 31 were cured, 7 improved, 1 unrelieved, 2 died, and 4 were still under treatment at the time of the report. In cases of tubercular arthritis an emulsion of cinnamic acid was injected into the joints, the following formula being employed:

℞ Acid cinnamic.....5.0
Ol. amygdal.....10.0
Vitelli ovi unius
Sol. sodii chlorid (0.7 per cent.).....
q. s. ut fiat emulsio.....100.0

The cinnamic acid is first rubbed fine with the oil, then the fresh yolk of one egg is added, after these have been mixed together the salt solution is added in drops. The resulting emulsion has a strongly acid reaction, which before it is used must be neutralized by addition of a 25 per cent. solution of potassium hydrate. About 5 c. cm. is deeply injected and the injection repeated twice a week. In cases of fistulous processess a solution of cinnamic acid in alcohol (1 to 20) was injected into the surrounding tissue. If this was insufficient the foci were laid bare, curetted and tamponed with balsam of Peru gauze, or cauterized with cinnamic acid in alcohol. Frequent irrigation of wound cavities with the latter or with Peru balsam was also found of value.—*Wein. Medizin Presse*, No. 11, 1892.

SURGERY OF THE GALL-PASSAGES AND LIVER.

By DR. W. KÖRTE,
BERLIN.

(*Continued from the last issue of the* REPORTER.)

Cholecystotomy with subsequent suture or cholecystendysis, as it has been called by Courvoisier, the father of the operation, has usually been designated as "ideal" but "dangerous." The danger feared was the possible bursting of the suture, but numerous cases have shown that this danger does not exist, that is when suitable cases for the performance of the suture have been chosen. The choledochus must be free and the walls of the gall-bladder strong. For this reason also, I have hesitated in performing the suture in cases of empyæma of the gall-bladder. According to Voight's report in the *Deutsche Medicinische Wochenschrift,* Heusner has made his suture in thirteen cases with entirely satisfactory results.

The great advantage of the operation lies in the fact that by means of it a more rapid complete healing—and therefore cure—can be obtained than by any other method, since biliary fistulæ, which are so unpleasant, are avoided thereby. Apart from the great discomfort caused to the patient by the constant discharge of bile from these fistulæ, the loss of bile entailed is by no means an immaterial one. In some cases that have come under my notice from 300 to 700 grammes of the fluid have been absorbed by the dressings. It seems that some persons bear well the loss of bile, while it affects others most unfavorably. These latter patients will become greatly emaciated in spite of the maintenance of a rich, nourishing diet.

An advantage of the gall-bladder suture, besides that of doing away with the possibility of fistula, is the fact that the abdominal wound may at once be closed, all but a small opening for the strip of iodoform gauze. In this way the ultimate probabilities of abdominal hernia are not nearly so great as when the gall-bladder is stitched to the abdominal wall. Again, when the incision is made parallel to the edge of the ribs, the possibilities of subsequent hernia are materially lessened in my estimation. The scar is close to the thorax and the liver lies behind it, and in this way the intestines do not exert any material pressure upon the scar tissue. Moreover, in women the corset acts as a compressing bandage and removes the pressure upon the wound.

In the majority of cases of simple concremental formations in the gall-bladder, and of occlusion of the ductus cysticus by stones, with subsequent dropsy of the gall-bladder, I consider cholecystotomy with subsequent suture and replacing of the gall-bladder as the best procedure. In such cases I would never contemplate the extirpation of the gall-bladder, although the procedure may be attended by good results when performed skillfully—this fact is demonstrated by Langenbuch's results. Nevertheless, I do not consider Langenbuch's reasons for the performance of the operation as well founded. In four autopsies performed in cases of gall-stone I have found small concremental formations in the liver itself, while Langenbuch boldly asserts that these stones can only be formed within the gall-bladder, and that the removal of the latter removes also their source of formation. My own experiences are however, also upheld by such authorities as Weigert, Sendler, Thornton, and Courvoisier, and possibly also by Braun and Buchanan, who have also found concremental formations in the liver itself.

If after the operation of cholecystotomy concremental formations again subsequently make their appearance in the gall-bladder, a second operation would be accompanied by no greater difficulties than the first, similarly as in a relapse in cases of stone in the bladder. This possibility of a recurrence of the trouble, would not, however, offer any inducement to me regarding the advisability of an extirpation of the gall-bladder. It seems also to me to be an unspoken law of conservative medicine—or rather surgery—that an organ which can be retained with justice should not be removed—and the utility of the gall-bladder cannot be denied. Finally, I must not forget to add, that the extirpation of the gall-bladder is an operation of far greater technical difficulties than its opening and subsequent suture. I would reserve the operation of cholecystotomy for performance only in such cases in which the walls of the gall-bladder are of such a nature as not to warrant the immediate suture.

In five cases of dropsy of the gall-bladder (hydrops) (Cases I to V) stones were found ranging in size from that of a pigeon's egg to the size of a cherry. Usually several stones were found in each case, and in one case several small ones as well (Case V). In Case IV, a stone as large as a pigeon's egg was found that closed the cystic duct. Out of the six patients operated upon for enlargement of the gall-bladder, in only one were no stones found. This patient (Case VI) was sent to me by her physician, Dr. Walsten, having been suffering for nine months with the most severe vomiting of all foods, as well as cardialgia. The gall-bladder was enlarged and easily felt, and yet when I opened it I only found a large quantity of gall, but no stone; neither could any concremental formations be found in the bile ducts. The pylorus and stomach were found normal. The liver, however, did not appear entirely normal. After the gall-bladder was closed it was fastened to the peritoneum at the edge of the ribs with a few buried sutures. The condition of the patient improved wonderfully. She had no pain and could eat heartily. After her return home, however, the old symptoms gradually returned.

In one case, my diagnosis wavered between that of gall-stone and of a malignant growth of the liver. An exploratory incision was made and a carcinoma of the liver found (Case VII).

In the four cases of empyæma of the gall-bladder, serious conditions were present in all. In the least serious case the gall-bladder had grown fast to the abdominal wall, and the suppuration had extended into the latter (Case VIII). In this case there was no stone and the cystic duct was obliterated. Another patient besides suffering both from suppuration and stone in the gall-bladder, had consecutive suppuration of the gall-ducts in the liver, and carcinoma of the pancreas as well. It is almost needless to say that this case had a lethal ending. In the third case suppuration in the liver and in the subphrenic space occurred as consequent to the empyæma of the gall-bladder. After many operations these various foci of suppura- were found and successfully treated (Case IX), finally an occlusion, of the choledochus also occurred, and this was also successfully treated. The fourth patient (Case X) applied for treatment when already suffering from symptoms of septic poisoning. At the operation the outer surface of the gall-bladder was seen to be discolored being yellow in portions. Three large die shaped stones were removed, the mucous membrane was found to be partly necrotic. It will be seen that the patient was operated upon just in the nick of time to save her from complications which soon must have terminated fatally, or at least as soon as the suppuration extended to the abdominal cavity. Even after the operation there were very threatening symptoms which pointed towards suppuration of the liver, but these fortunately abated after a time. The necrotic parts of the mucous membrane of the gall-bladder sloughed off. From the pus found in the gall-bladder, pure cultures of the *bacterium coli commune* were found—this is as Naunyn has also observed.

In all cases, empyæma of the gall-bladder proved itself to be a most dangerous disease, accompanied by most grave effects. The operation consisted in an opening of the gall-bladder and stitching it fast to the abdominal wall. In two cases the gall-bladder had already formed adhesions to the abdominal wall, prior to the operation in consequence of the inflammatory process. In these cases the operation was, therefore, considerably simplified.

The severest symptoms manifested by any disease of the gall-duct system, were seen in cases of occlusion of common gall-ducts. This is usually occasioned by stone, but less frequently by the formation of cicatrices, or by tumors that exert a pressure from without the gall-bladder. The great dangers of this condition are very palpable and well-known. The secretion from the liver is prevented from entering the digestive system, on the one hand, and the bile is forced in the circulation, giving rise to cholæmia. The fact that we can relieve this conditiou by the use of the knife, can rightfully be regarded as a triumph of surgery. It has been the ingenius propositions of von Winiwarter that first shed light upon this important subject. He taught that if a communication were re-established between the gall-bladder and the intestine, that the gall would again be absorbed by the digestive system. In other words, he was the first both to suggest and perform the operation of cholecystoënterotomy. His successful operations have been repeated also by other

surgeons.* In connection with Winiwarter's operation Sprengel also succeeded in establishing an anastomosis between the enlarged ductus choledochus and duodenum.† While this operation gets around the occlusion of the gall-duct by the creation of a connection with the intestine it also acts directly upon the occlusion by stone, of the choledochus. The stone has been crushed in the gall-passage and débris pushed into the intestine (Langenbuch, Kocher, Credé) and finally the stone has been cut out of the exposed ductus choleodochus and the wound sewed up (Heusner, Küster, Courvoisier) and with good results.

Frankly, those operative methods which deal directly with the cause of the occlusion —the gall-stones—are preferable in such cases in which a removable of the occlusive cause is of principal importance. If the occlusion be caused either by cicatrices or tumor, the creation of a gallic-intestinal fistula is the only rational procedure; this is equally true when sufficient exposure of this ductus choledochus is impossible. This last complication was present in three cases in which I operated for occlusion of the choledochus from stone. In the operations referred to, I had it in my mind to lay bare the ductus choledochus, and so I worked down through dense adhesions at the under surface of the liver, as deeply as possible, in order to search for stone; but I neither was able to find a stone (although in two cases the autopsy revealed them), nor even positive of having found the choledochus from amidst the cicatrical tissues. I therefore, in the first two cases (cases XII and XIII) established a gallic-fistula in order to prevent cholæmia, and, indeed, in two separate operations. This for the reason that in the one case (XII) the shrunken gall-bladder was difficult to apply a suture to, and in the second because the the gall itself was decomposed, and I therefore considered the dual operation safer. After the first operation the first patient showed a marked improvement of the cholæmic symptoms, but lost considerably in consequence of the loss of gall, and refused to submit to the second operation until too late. Therefore, the establishment of the gallic-intestinal fistula was not undertaken, the patient being too far gone. If it had been possible to complete this operation within a reasonable time, or possibly at the one sitting, the patient's life perhaps might have been saved. (This was the first case of any operation upon the gallic-system.) The second patient came with severe septic symptoms in consequence of diffuse suppuration of the liver and gall-passages, and died from septic poisoning. Here any procedure would have come too late to be of any avail. Neither of the patients succumbed from the effects of the operation but from their original trouble. It was interesting to me to note, that even at the autopsy, when entering the abdominal cavity through the wound made by this operation no stone or obstruction could be found. Not until both the stomach and liver had been removed, and the ductus choledochus carefully examined from the intestine on, was I able to find in the duct, close to the opening of the cystic duct, and wedged in, a stone of the size of a hazlenut. One of these stones was easily crushed with the fingers, but the other was quite hard.

In the third case an occlusion of the choledochus developed while the case was under my observation, the case being primarily one of suppuration of the gall-bladder, liver, and subphrenic space (Case XI). The patient after having shown total acholia in the fæces for four weeks, was operated upon. I was, however, unable to lay bare the choledochus, and it remained uncertain as to whether the obstruction was caused by stone or cicatrical stenosis, the indications, however, were in favor of the latter diagnosis. Finding myself completely thwarted in my endeavors to lay bare the gall-passages, I quickly determined to establish an anastomosis between the gall-bladder and the duodenum. I therefore sewed the gall-bladder to the bowel, opened both organs and then stitched the edges of the cuts together. The act of applying a suture so deep in the abdominal cavity, constituted not only a difficult but most tedious undertaking. For the sake of precaution, I wound a strip of iodoform gauze around the suture, and kept part of the abdominal wound open. The suture uniting the gall-bladder and intestine healed well, however, and the gall began to flow into the intestine. No gall was ever discharged through

* See *A. Courvoisier, Chirurgie und Pathologie der Gallenwege.*

† See *v. Langenbeck's Archives,* 42–3.

the wound. The result of the operation was truly excellent; the patient recovered rapidly, and only the sloughing out of a few silk sutures gave rise to some slight difficulties. This is the second case of cholecysto-duodenostomy that was ever performed, the first operation of the kind having been performed by Terrier.*

Rupture of the gall-stone into the abdominal cavity only occurred once in my experience. The patient was an old lady, who had suffered intensely with gall-stone colic, and the rupture occurred during one of the attacks of colic. In similar cases Küster has operated, but without being able to prevent the development of peritonitis. Rupture of the gall-stone into the intestine with subsequent ileus, I have seen in three different cases.† Two of these patients were operated upon and the one recovered, while the third patient died without operation. In the two cases that died, the autopsy revealed the perforation of the gall-bladder into the duodenum. Licherstern, Courvoisier, and Treves report several similar cases.

I will now briefly give the histories of the patients upon whose cases the foregoing remarks have been based.

Cholelithiasis; dropsy of the gall-bladder; cholecystotomy; plastic closure of the fistula; recovery.

Case I. Mrs. E., thirty-eight years old. The patient had been married for sixteen years and had borne two children, the youngest being eleven years old. For eight years she had been troubled with pains in the region of the liver, growing worse always during menstruation. Latterly she also complained of simultaneous "stomach cramps" and back-ache. Bowels sluggish, but fæces not decolorized. During the attacks the color of the face was slightly yellow.

The patient was admitted to the hospital July 2, 1890. She was well nourished. Skin slightly yellow. The liver stretched beyond the curve of the ribs to the width of two fingers. The gall-bladder could be easily felt as a semi-spherical tumor, and was painful to the touch. Urine free from gallic coloring matter. Fæces normal.

The patient was kept under observation several weeks, The size of the gall-bladder was seen to vary. All the symptoms were aggravated during menstruation. July 30, 1890.—Cholecystotomy was performed at one sitting. Longitudinal incision over the tumor; partial evacuation of the contents of the gall-bladder by puncture. The gall-bladder then stitched to the abdominal wound, and opened. A light colored shiny fluid was evacuated, two stones as large as pigeon eggs removed with forceps. The case proceeded well, and there was a large secretion of gall. On September 3 and 13, the fistula was burnt with the Paquelin cautery. On September 23, the gall-badder was closed by a union of the incision in it with a row of sutures. The abdominal cavity was then closed, and healed by first intention. The patient was discharged November 21.

During the beginning of April she again came under treatment, being in perfect health but having an abdominal hernia.

Discharged November 16 1891 as completely cured.

Cholelithiasis; dropsy of the gall-bladder; stone wedged in the cystic duct; cholecystotomy; suture and sinking of gall-bladder; recovery.

Case II. Anna V., 23 years old; working woman.

On October 31, 1890, the woman suffered from an abortion, and the subsequent uterine hæmorrhage lasted for 15 days, and was only checked by the use of the curette. Since then the patient had suffered from pain in the region of the liver.

Admitted November 29, 1890.

Uterus enlarged, flabby, and discharging blood.

Curetted and iodine injected.

Gall-bladder palpable as a round tumor.

Liver not enlarged. The gall-bladder painful as well as painful to the touch. No icterus.

December 13,1890. Cholecystotomy performed. Longitudinal incision, gall-bladder drawn forward and packed around with gauze, then incised and about 50 cubic centimeters of a viscid yellowish fluid evacuated, and two stones the size of cherries, removed from the opening of the ductus cysticus.

Gall-bladder closed with two rows of

*See Courvoisier's work on the subject.

†These have been described in my work on *Ileus, Berliner Klinik,* No. 36, pages 14 to 17.

sutures and stitched to the peritoneum of the edge of the wound. The abdomen closed until over the region of the gall-bladder suture, but subsequently—after the lapse of four days, when the stitches supporting the gall-bladder had been loosened—entirely closed. Healing by first intention.

January 13, 1891, discharged as cured. The patient was subsequently seen again after the lapse of several months, and was found to be perfectly well. There was no abdominal hernia in this case.

Cholelithiasis; dropsy of the gall-bladder; stone wedged in the cystic duct; Cholecystotomy; suture and subsequent sinking of the gall-bladder; recovery.

Case III. Mrs. L., 33 years old. Had borne many children. Had suffered for the last five years with pain in the upper abdominal region; and for several months back had had periodical attacks of colic. She had never been jaundiced. Bowels sluggish. Admitted January 6, 1891. Gall-bladder enlarged, and easily palpable under the margin of the ribs as a roundish tumor. Moderately painful to the touch. No icterus.

January 12, 1891. Cholecystotomy. Longitudinal incision. Mesentery adherent to the gall-bladder. Adhesions loosened, the gall-bladder drawn forward, and surrounded with gauze. The incision allowed the evacuation of a quantity of a light yellow, slimy fluid, and a stone the size of a huckle-berry. A second stone was found wedged in the ductus cysticus, and after many futile efforts at extraction, was easily removed by the fingers, these being inserted into the abdominal cavity, under the duct. Suture applied in two rows to the gall-bladder. Abdominal wound closed to all but two sutures, which were also closed on the fourth day. Absolutely normal course of wound. Patient discharged as cured February 9.

Cholelithiasis; dropsy of the gall-bladder; gall-stone colics; stone wedged in the cystic duct; cholecystotomy; suture and subsequent sinking of the gall-bladder; recovery.

Case IV. Mrs. S., 33 years old. Had borne several children, the last only four years previously. In the year of 1880 she had catarrh of the bladder, and retention of urine, caused by an ovarian tumor. On November 19, 1890, double ovariotomy was performed upon her in the Urban Hospital. After her child-birth in the year of 1882, colicky pains appeared in the right side of the abdomen, which were characterized by the patient as "stomach cramps." During the last pregnancy these attacks became more frequent and severe, especially after eating, and from time to time the skin assumed a slightly yellow color. On August 18, 1891, she had an unusually severe attack, and the gall-bladder was found to be enlarged.

On August 22, 1891, she was admitted to the hospital. The patient was seen to be of delicate constitution and the color of the skin slightly yellow. Below the margin of the ribs on the right side, the gall-bladder could be palpated as a round, hard and very sensitive tumor. The urine was normal and contained no gallic coloring matter.

August 24, 1891. Cholecystotomy performed. Longitudinal incision from the margin of the ribs down for 8 centimetres; and situated directly over the tumor. The gall-bladder which was found to be as large as a hen's egg, was drawn forward and bedded in gauze. Forty or fifty cubic centimetres of light gall with flakes evacuated. A stone could be felt by the finger to be imbedded, or rather wedged, in the ductus cysticus, and was removed not without considerable difficulty with a blunt hook. Gall-bladder closed with a single row of sutures. Abdominal wound closed, but a strip of iodoform gauze left between two sutures, as a drain, which was removed on the fifth day. Subsequent course without fever, but during the first few days still pain in the gall-bladder. A few weeks after her discharge some of the sutures sloughed away.

She reported November 16, 1891, as perfectly well.

Cholelithiasis; frequent gall-stone colics with icterus, and temporary occlusion of the gall-bladder; cholecystotomy; suture, and subsequent sinking of gall-bladder; passing discharge of gall; recovery.

Case V. Mrs. G., 31 years old. The patient had borne six children. Four months after the last child-birth gall-stone colics with icterus appeared (July, 1890). During the May of 1891 the severe gall-stone colics again appeared. She was admitted October 25, 1891, with a most

severe attack. Icterus appeared, and the fæces became clay-colored. On October 30, gall was again present in the fæces. During this time the gall-bladder could easily be felt as a tumor about the size of a hen's egg, just below the margin of the ribs. It was very sensitive to the touch, and this sensitiveness did not abate even after the attack had passed. After the stools had been normally colored for six days, and the icterus had disappeared, the operation of "ideal cholecystotomy" was performed on November 6, 1891, with a transverse incision along the margin of the ribs. The gall-bladder was found to contain viscid slime and many stones, the most of which of a pyramidal form with a four-sided base. The cystic duct was stuffed full of stones which were removed with the hook. In the ductus choledochus nothing was found by palpation even from the abdominal cavity. Sounding the latter was attempted, but found impossible. Suture of the gall-bladder with two rows of catgut sutures. Iodoform gauze laid over the suture. Normal course of recovery with the seventh day, and then some gall was drained out through the strips of iodoform gauze. This discontinued on the tenth day. The wound was entirely healed on November 27, 1891.

Severe cardalgia. Vomiting; enlargement of the gall-bladder; existence of gall-stone accepted; cholecystotomy; no gall-stone found; suture, and subsequent sinking of the gall-bladder. Healing of the wound; subsequent return of the cardalgia in four weeks (hysteria.)

Case VI. Mrs. G., 40 years old. Attending physician, Dr. Wulsten. Since July, 1890, the patient had severe pains in the back and abdomen, accompanied by nutritive disturbances. In November, 1890, a large subserous myoma and both ovaries were removed. The pains in the abdomen continued and concentrated themselves in the region of the stomach. They became most intense and morphine was required to afford any relief. Nutrition became greatly impaired owing to the constant vomiting; the patient became very much emaciated, losing seventy-five pounds in the course of a few months. In May, 1891, an examination was made while the patient was under the influence of an anæsthetic. A round, hard tumor could be felt in the region of the gall-bladder, and besides this, a floating kidney in the right side.

Diagnosis: Possible dropsy of the gall-bladder, with incarcerated stone in the cystic duct.

Laparotomy was performed on May 21, 1891. Incision parallel with the border of the ribs. Gall-bladder enlarged but not adherent. No stone could be felt. The liver and gall-bladder were drawn forward. The gall-bladder incised and a viscid dark green gall evacuated. Digital examination failed to reveal any stone; the gall-bladder then closed with two rows of sutures. The pylorus drawn forward, but found normal. Examination of the neighboring viscera negative. The very loose attachments of the lower lobe of the liver were reenforced by three silk sutures to the edge of the ribs. The abdominal wound closed, and the subsequent course of recovery from the operation entirely normal.

The pains ceased entirely, and the patient took and retained plenty of nourishment and increased in strength. She was discharged on August 18.

In spite of the negative result of the operation the primary beneficial change of the patient gave hopes of an ultimate complete recovery, but no sooner had the patient returned home, than the old symptoms again became manifest. Her present condition is, according to the statement of her physician, as bad as it ever was.

Carcinoma hepatis, mistaken for gall-bladder tumor; exploratory incision.

Case VII. Mrs. S., sixty years old. Until six weeks prior to admission the patient had never suffered from any symptoms of gall-stone. She became ill during the first of May with severe periodical pains in the region of the liver, and simultaneously a gradually increasing tumor became manifest, which from its form and location corresponded to a gall-bladder.

The patient was admitted on June 13, 1891.

Extending over the liver, on a perpendicular line with the nipple, and at the edge of the ribs a hard, rather flat, circular and sensitive enlargement could be felt, which was connected with the liver. No icterus, and no vomiting.

Diagnosis: While the finding was not at all typical the probabilities seemed to point to "retention-cyst" of the gall-

bladder, but the possibility of the growth being a malignant tumor was also recognized. On June 16, 1891, an exploratory incision was made, parallel with the curve of the ribs. The growth was found to be a tumor of the liver itself and very vascular. The gall-bladder, which was covered by the growth, was not enlarged. The abdominal wound was closed, but healing was delayed by phlegmons. The pains abated, but the tumor continued to grow. The patient was seen again in October; she had then ascites and knotty tumors in different parts of the abdomen. Death about the middle of November, 1891.

(*To be continued.*)

DRUNKENNESS AS A VIRTUE.

Dr. George Foy sends the following letter to the *London Medical Press*, of November 18, 1891:

Sir,—As an evidence of the altered social habits of the general public, I wish to bring a curious old volume under the notice of your readers. It was printed for E. Curl, against Catharine Street, in the Strand, London, in 1723, and is marked "Price Five Shillings." The title is as follows: "Ebrietatis Ecomium, or the Praise of Drunkenness; wherein is authentically and most evidently proved the necessity of frequently getting drunk; and that the practice of getting drunk is most ancient, primitive, and catholic. Confirmed by the example of Heathens, Turks, Infidels, Primitive Christians, Saints, Popes, Bishops, Doctors, Philosophers, Poets, Freemasons, and other men of learning in all ages. By Boniface Oinophilus, de Monte Fiascone, A. B. C."

> Vinum retificans cor hominis,
> Narratur et Prisci Catories,
> Sæpe mero caluisse virtus.
>
> HORAT.

The author lays down the following rules for getting drunk, to wit:

1. Not too often.
2. In good company.
3. With good wine.
4. At convenient times.
5. Force no one to drink.
6. Do not push drunkenness too far.

The volume ends with a postscript by F. Sans-terre, dated May 1, 1723, "*From my Garret in* Bandy-legged Walk." A year made memorable by the death of "Vanessa."

Communications.

REPORT OF A FEW LAPAROTOMIES DONE IN THE ALLEGHENY GENERAL HOSPITAL BY R. STANSBURY SUTTON, M. D., GYNÆCOLOGIST TO THE HOSPITAL.

BY MARK A. RODGERS, M. D.

(*Continued from the issue of July 9, 1892.*)

Continuing the report of Laparotomies done at the Allegheny General Hospital from the issue of July 9th, of this journal, I beg leave to submit a second series of cases which I think will prove much more interesting to lovers of abdominal surgery than those of the first report.

CASE XI. Double salpingo-oöphorectomy. Diagnosis:—menstrual epilepsy, chronic salpingitis and ovaritis. Miss R., aged 24. History negative until puberty, at which time she developed menstrual epileptic convulsions of a severe enough type that she presented many scars on various parts of her person, from falls, burns, etc., received during seizures. She had given birth to a child two years previous to her admission, and during pregnancy had experienced an abatement of the epileptic symptoms, which returned with increased severity after the birth of the infant. On examination, there appeared a small bilateral laceration of the cervix, which, however, was occasioning her no discomfort, and a mass in Douglas' pouch immobile and excessively tender, which was thought to be a prolapsed ovary.

Operation June 7th, 1892. Both ovaries were prolapsed, much congested, enlarged and firmly adherent to uterus, rectum and *cul de sac*. Both were removed. Abdomen flushed and closed. Time, twenty minutes.

Had two seizures on sixth day, at which time temperature rose to 101 $\frac{3}{5}$°. Calomel and saline purge was followed by normal temperature. No seizures from that until present time. Patient made rapid recovery and is now in good health.

CASE XII. Cholecystotomy. Diagnosis, impacted gall-stones. Mrs. B.,

aged 45. History negative, save as to hepatic colic, which had been almost incessant for several years. On admission was deeply jaundiced and suffering great pain.

Operation June 10th, 1892. An incision three inches in length was made in the right hypochondriac region, exposing the gall-bladder and liver. The upper end of the incision began a short distance above the end of the tenth rib. The liver seemed congested and the gall-bladder was enormously distended. An aspirator was introduced into the latter and about one pint of muco-purulent material withdrawn. Numerous calculi could then be felt through the cyst wall. The bladder was next stitched to the peritoneum, the wound closed above and below, and finally the viscus incised. Seventy-two stones were removed, ranging in size from an English walnut to a small pea; two of the smaller were removed from the cystic duct and one extracted with great difficulty from the common duct. The instrument used for this purpose was a small uterine curette. Time, one hour.

Jaundice almost immediately disappeared. Patient had a severe attack of colic during fourth day. Otherwise convalescence was uninterrupted. Discharged June 29th, with slight biliary fistula which was rapidly closing by granulation. Patient at that time had good appetite and was in good state of general health.

Case XIII. Double salpingo-oöphorectomy. Diagnosis,—double pyosalpinx, with pelvic peritonitis. Mrs. B., aged 40. History negative as to difficulty under consideration, save a history of long continued and excessive pelvic pain and an indistinct history of amenorrhœa. During a sojourn of one week in the hospital, her temperature registered from 99⅘° to 101⅘°. On inspection and palpation, the abdomen was found to be enlarged especially on right side, and presented a diffused tumor-like mass, extending from the umbilicus. Bimanuel examination revealed uterus firmly fixed and semi-fluctuating masses encroaching upon the vaginal vault from both sides. This patient suffered intense agony and preferred death to her miserable condition.

Operation June 11, 1892. This was the most difficult case operated in this entire series of twenty-one cases. When the abdomen was opened the omentum was found adherent to the intestines; after its separation it was so bruised and lacerated that much of it required amputation. The intestines were agglutinated by dense connective tissue, and the whole fitting down over uterus and adnexa like a cowl. In attempting to separate the adhesions the tube on the left side was ruptured and fully a quart of virulent looking pus evacuated. A line of cleavage was attained and the tube which was converted into an abscess sac of prodigious size was with the left ovary finally tied off. The operator's attention was then turned to the right side. The intestines were raised and an enormous pus tube exposed to view. This was also found bound down by adhesions, but they yielded more easily to the operator's efforts than was expected, and after ligating several quite large vascular cords of connective tissue, the tube was finally delivered intact. It was ligated and removed. The abdomen was thoroughly flushed with about eight gallons of very hot water and closed. Time on the table 45 minutes.

There was some distension on the fourth day, which was relieved by turpentine enemata. Union occurred by first intention and the patient was discharged June 26, rapidly regaining health and strength. The fact that union took place without a drop of pus, is sufficient evidence in the operator's opinion that an abundant supply of hot water is adequate for purposes of thorough disinfection.

Dr. Sutton is in accord with Tait and Price on the question of pelvic abscess, and attacks all pus accumulations in the pelvis through the abdominal wall, unless pointing has occurred in the vagina. In a case recently done at his private hospital the abscess had been discharging per rectum. The operation was followed by a fæcal fistula which, however, entirely closed within the first few weeks.

Case XIV. Double salpingo-oöphorectomy. Diagnosis: — atrophy of right ovary; left ovary cystic and enlarged. Mrs. N., aged 22. History of sterility, menorrhagia, dysmenorrhœa and great pelvic pain.

Operation June 12, 1892. Dr. Joseph Taber Johnson, of Washington, being Dr. Sutton's guest was requested by the latter to operate. The invitation was accepted and the operation was performed in accordance with Dr. Johnson's well-known

skill. No sponging or flushing. Recovered. Discharged June 23, eleven days after operation.

Case XV. Single ovariotomy. Diagnosis:—dermoid cyst. Miss S., aged 32. History of great pelvic pain, dysmenorrhœa, etc.; examination revealed fluctuating tumor in right pelvis.

Operation June 16, 1892. Cyst of right ovary size of an orange, removed intact. Containing skin and hair in interior of second daughter cyst. No sponging or flushing. Time 11 minutes. Convalescence uninterrupted. Discharged July 1.

Case XVI. Double salpingo-oöphorectomy. Diagnosis: Double pyosalpinx. Mrs. S., aged 26. Sterile for six years. Attack of gonorrhœa from husband soon after marriage. Severe attack of peritonitis while at hospital, a short time previous to operation. Examination:—large masses on both sides of uterus, latter being firmly bound down.

Operation, June 18th, 1892. Universal dense adhesions. Operation very difficult. Pus in both tubes. Tubes and ovaries on both sides removed. Abdomen flushed and closed. Time, 30 minutes. Recovered; rather tardy convalescence.

Case XVII. Single ovariotomy. Diagnosis:—solid tumor of right ovary, probably a myoma. Miss S., aged 33. Tumor first noticed five years previous to admission.

Operation, July 19th, 1892. Solid tumor of right ovary of about six pounds weight. Adhesions to abdominal parieties, uterus, bladder and floor of pelvis. This operation was also quite difficult. Pedicle was tube which required ligation before the delivery of the tumor could be effected and great difficulty was experienced in accomplishing the latter. The operator succeeded in insinuating his hand between the tumor and its pelvic adhesions, and then forcibly wrenched it from its attachments. Abdomen flushed and closed. Time, 35 minutes. Recovered. Convalescence uneventful.

Case XVIII. Intraligamentous cyst. Miss T., aged 29. History: One child seven years prior to admission; had been an invalid since that time. Large mass on examination in right pelvis. Operation, June 27th, 1892. The presenting portion of the cyst was stitched to the abdominal wound, incised and about a quart of serum and pus evacuated. The cavity was then carefully cleansed, the sutures withdrawn and the cyst enucleated. The enucleation was attended with some hæmorrhage and was quite difficult in execution. The pedicle was finally ligated with tube and round ligament, at cornu of uterus. Left ovary was normal and therefore not disturbed. No flushing. Time, 30 minutes. Recovered. Convalescence uneventful.

Case XIX. Double salpingo-oöphorectomy and anterior fixation of uterus. Diagnosis:—procidentia uteri, both ovaries prolapsed and hypertrophied. Mrs. S., aged 42. History:—seven children, last, five years of age. Patient had been chronic invalid, bed-ridden much of the time since birth of last child. On examination both ovaries were prolapsed, hypertrophied and exquisitely tender and the uterus procidnous.

Operation, June 28th, 1892. Abdomen very fat and flabby. Both ovaries were large, cystic and hæmorrhagic; both removed and uterus stitched to lower angle of wound, with two buried silk-worm gut sutures. No flushing or sponging. Uneventful convalescence.

Case XX. Double salpingo-oöphorectomy. Diagnosis, prolapsed ovaries, chronic salpingitis. Miss C., aged 19. Bore one child at 17. Menorrhagia and chronic invalidism.

Operation June 29th, 1892. Both ovaries very large and cystic; chronic salpingitis. Tubes and ovaries on both sides removed. No flushing or sponging. Time, 15 minutes. Recovered; convalescence uneventful.

Case XXI. Supravaginal hysterectomy. Diagnosis:—fibroid uterus, chronic isalpingitis and ovaritis and pelvic pertonitis. Mrs. L., aged 46. Mother of seven children. Violent uterine hæmorrhages. Uterus on examination large and fixed.

Operation July 2nd, 1892. Right tube much enlarged and ovary composed of dense connective tissue and contained about four ounces peculiar looking fluid. The ovarian parenchyma was completely obliterated. Tube twisted once upon itself and with ovary firmly embedded in a mass of old dense adhesions and in similar condition, pathologically, as right side. Uterus bound firmly to promontory of sacrum and sigmoid flexure of colon. After separation of adhesions the uterus was drawn through the abdominal wound, bringing with it the sigmoid, still attached to the left horn. This was torn off and

returned to the cavity. The uterus was now discovered to be so injured that it was deemed wise to amputate it. An elastic ligature was consequently passed around the cervix. Attention was then turned toward the hæmorrhage, which had all along been very profuse. It was soon controlled after which two hysterectomy pins were passed above the ligature, the uterus amputated and the cervical canal seared with a Paquelin cautery. The operation then proceeded after the method of Hegar, e. g.:—The peritoneum was stitched with catgut continuously, below the ligature, and closed for the distance of about one inch above and below the stump, while the muscles and superficial tissue were allowed to remain open. The wound above and below was closed with deep sutures, in the ordinary manner. The tissues were then separated from the stump and the cavity firmly packed with iodoform gauze. The stump was next dusted with powdered subsulphate of iron and the whole closed in the usual manner.

Dressing changed on third, sixth and eleventh days; at latter dressing the stump was found to have separated and the ligature was consequently removed, leaving a cavity filled with healthy granulations. Not a particle of odor was noticeable at any time, the stump being completely mummified by the styptic. Patient made rapid recovery, sitting up in bed on sixteenth day.

Dr. Sutton is very favorably impressed with the elastic ligature. He states that his experience with it in the past two years was preceded by the loss of a case from secondary hæmorrhage, in which he used the *ecraseur* of Koeberle. In this instance the neck of the uterus was soft and did not sufficiently resist the constricting wire, and the result as above followed, over a quart of blood escaping into the dressings before being discovered by the nurse. Since that event he has used the elastic ligature and has not lost a case.

The conclusion of this series of cases closes the reports until after Sept. 1st, 1892, when the gynæcological annex to the hospital will be re-opened. I shall then report the interesting cases as they present from time to time.

In summing up the work at this hospital since March 26, 1892, we find that there have been 21 abdominal sections, with 19 recoveries and two deaths.

THE EFFECT OF DISEASES OF THE EAR UPON THE GENERAL CONDITION.*

By WILLIAM CHEATHAM, M. D.,
PROFESSOR OF DISEASES OF THE EYE, EAR, THROAT AND NOSE, LOUISVILLE MEDICAL COLLEGE; EYE, EAR, THROAT AND NOSE PHYSICIAN, LOUISVILLE CITY HOSPITAL.

It shall be my endeavor in this short paper to cite some cases which have come under my observation in recent years, hoping they may be of profit not only to the general practitioner, but also to the aurist. The ear and its diseases appear to be less understood by the general practitioner than diseases of the eye, yet the former are of much more consequence than those of the latter, as more serious results are liable to follow their neglect.

The subject of this paper was brought to my mind on the day I received a note from our most worthy Secretary, asking me to prepare an article for this meeting of your Society. A prominent lawyer of our city had just made one of his monthly visits to my office to have his ear cleansed, saying his nausea had returned. On that day this gentleman said to me, "Doctor, you cured me three years ago of a cough that had troubled me much for several years, that had resisted all previous treatment." The cough has never returned. I remembered syringing from his ear a mass of inspissated wax and pus, and relieving him by treatment of quite an acute attack of inflammation of his external auditory canal. As I was wiping out his ear on the day of this conversation it made him cough, and recalled to him what relief I had given him by removing that mass three years before. Since then he has visited me frequently complaining of nausea; he has what we call necrosis of the attic of the middle ear, which has never healed, suppurating just the slightest all the time, and every four or six weeks pastes over the upper and outer parts of the external auditory canal with dried pus. When this accumulates to a certain extent he suffers a great deal from nausea and

*Read before the Mitchell District Medical Society at West Baden, Indiana, July 7, 1892.

comes in to have me remove it. This I do and relieve his nausea until there is another accumulation. His first reflex trouble was a cough; this has been replaced by nausea. The suppurating surface in this case has no connection with the middle ear cavity.

Reflex symptoms of this kind are not uncommon; in all cases of obscure cough which I am called upon to treat, it is part of my routine examination to look into the ears. Auditory canals of different indiduals differ very much in sensitiveness, as that of other parts of the body of the same individuals do. But that sneezing, cough, vomiting and even epilepsy may be the result of reflex irritation from the external auditory canal is beyond question. Fabucius, of Hilden, quoted by Roosa and other authorities on diseases of of the ear, reports a case of a girl ten years of age, who put a small glass ball in her ear, who was finally seized with hemicrania, anæsthesia of the left side of the body, alternating with severe pain, until at last epileptic attacks occurred, with other symptoms. Fabucius wrote his friend Bauhinus, that he had cured the child by removal of the foreign body. A Dr. Kupper, as quoted by Roosa, reported a case of epilepsy the result of a foreign body in the external auditory canal, and another of cerebral irritation the result of impacted wax; these cases can be easily multiplied. Some years ago I reported a case of a young lady from Central Kentucky, who had been treated for a persistent hacking cough; and had also been treated by a noted specialist of Chicago for some obscure nerve disease, whom I relieved entirely by removing from one ear a mass of impacted wax. Woakes not only admits that ear cough is common, but says by continued irritation of the auricular branch of the pneumogastric, derangement of the innervation of the laryngeal muscles may follow. Spasmodic croup he gives as one of the possibilities of this reflex action. Woakes traces the irritation (Roosa says, p. 206): *First*, from the vaso-motor fibres associated with the auricular branch of the pneumogastric. *Second*, to the secondary vasomotor center the ganglion of the pneumogastric, whence he says it is deflected through sympathetic fasciculus, to the first crevical ganglion; *third*, thence by the nervi molles, to the vessels distributed to the mucous membrane of the larynx. He rejects the simple idea that the morbid impression is conducted along the sensitive fibres, from one region to another.

There yet remains in the minds of good men a doubt of the presence of a branch of the vagus in the external auditory canal. Quain and Fox says the branch of the pneumogastric supplies only the posterior part of the auricle, yet Fox has written one of the most extensive articles on ear cough ever printed. Clarke and Fox say ear cough has its origin "in the fibers of the fifth cerebral nerve distributed to the auditory canal." It remains a fact that ear cough is not uncommon, and that the weight of authority gives a branch of the pneumogastric nerve, distributed to the external auditory canal. Tissol reports a case of uncontrollable cough, the result of touching the external auditory canal. Teehlin reported with other cases, a case in the person of a military officer, who vomited considerably when ever his external auditory canal was touched. This sensitiveness may be in but one canal.

General Symptoms from Accumulations of Cerumen in the Auditory Canal: Aitken (*British Medical Journal*, No. 1630, p. 652) records three interesting observations in which general symptoms disappear after the removal of accumulations of cerumen in the auditory canal. In a little girl, eight years of age, with incessant cough, bad nights, frequent night-terrors, loss of appetite, and emaciation, without physical signs of pulmonary disease, one of the ears was found blocked with wax. In a man, eighty-one years of age, with restlessness, tremor, derangement of digestion, and deafness, the ears were found filled with large masses of hardened wax. A girl, eleven years of age, with a tuberculous family history, presented elevation of temperature, frequency and irregularity of pulse, but without other signs of organic disease. An accumulation of wax was found in the ear.

Not only wax and foreign bodies, but eczema, aspergillus, and furunculous inflammation of the external auditory canal may produce such symptoms as referred to.

Inflammations of the middle ear, and the danger therefrom I believe are beginning to be better understood than those of the external ear. Abscess of the brain, meningitis, pyæmia, phlebitis, mastoid

periostitis and necrosis, kidney complications from continued suppuration, are all well known results of suppuration of the middle ear. Abscesses of the brain (and middle ear suppuration produces a large majority of them) are getting rather common; many of them are now relieved by the trephine and incision or aspiration.

Cases of phlebitis as a result of middle ear suppuration are now relieved by tying the jugulars and curetting the brain sinuses. I have recently had a case of this latter trouble die before the mastoid could even be opened. I have recently seen a case of pyæmia in a stout healthy boy from Louisiana, the result of a subacute suppuration of the middle ear. Within the last week I have had two very bad cases of vertigo the result of acute suppuration of the middle ear. These cases are quite common. The last two cases mentioned were the result of pressure. Chronic catarrhal inflammations of the middle ear quite frequently cause vertigo. I have quite a number of such cases on hand, which have been treated by good men for cerebral and spinal trouble, as causing the vertigo. I have a lady under my charge now, who has frequent severe attacks of vertigo, which can be relieved only by the Eustachian bougie to dilate the tube, then inflation by the Eustachian catheter. Air cannot be gotten into the middle ear in this case except by use first of the bougie. I have one case of aural vertigo, in which the mouth of the Eustachian tube is dislocated, in which I had to pass the Eustachian catheter through the nose, and watch the instrument post-rhinoscopically and make a very long curious bend in the catheter before I could get air into the tube. Vertigo from disease of the internal ear is still better understood than that depending upon disease of either the external or middle ear. Meniere's disease has long been written of. The pathology of the disease has changed some in the last few years. These few notes I then hope will remind some of the gentlemen present, that in case of vertigo, cases of obscure cough and nausea, and other affections referred to, and some not mentioned, an examination of the ears should not be neglected. That suppuration of the middle ear is always dangerous; that the advice to let such cases alone, that they will outgrow it, is a thing of the past; that suppuration of the middle ear can cause pyæmia without involving the brain; such a case I forgot to mention, I saw with Drs. Bodine and Yandell, in which with other abscesses, there was one over the left scapula, which held about two pints of pus. Such cases cannot, of course, be relieved unless the cause is corrected. I could multiply instances enough of all the complications reported in this paper to fill many pages, but think enough has been said to show what diseases of the external, middle aud internal ears can do, how they affect the general economy, and consequently how important it is to attend to them early and knowingly.

THE PREVENTION OF PURULENT OPHTHALMIA NEONATORUM AS A CAUSE OF BLINDNESS.

Frederick E. Cheney (*Boston Medical and Surgical Journal*, April 14, 1892.) prefers the title of Purulent Ophthalmia Neonatorum to that which is usually used to describe this condition, namely, Ophthalmia Neonatorum, for that affection which so often leads to blindness. The total per cent. of those blind being due to this cause is from 18.6 per cent. at the Perkins Institution for the Blind, to 26.02 per cent. in the asylums of Switzerland. Owing to the importance of this subject the New York Legislature has passed the following Act:

Section 1. Should any midwife or nurse having charge of an infant in this State notice that one or both eyes of such infants are reddened or inflamed at any time within two weeks after its birth, it shall be the duty of such mid-wife or nurse so having charge of such infant to report the fact in writing within six hours to the health officer, or some equally qualified practitioner of medicine of the city, town or district in which the parents of the child reside.

Sec. 2. Any failure to comply with the provisions of this Act shall be punishable by a fine not to exceed one hundred dollars, or imprisonment not to exceed six months, or both.

Sec. 3. This Act shall take effect on the first day of September, 1890.

Too little time has elapsed since the passage of the Act for statistics, but it is recommended that other states pass similar laws.

THE EFFECTS OF INTRA-NASAL OBSTRUCTION ON THE GENERAL HEALTH.*

By LEWIS C. CLINE, M. D.,
INDIANAPOLIS, INDIANA.

Nearly, if not every one can recall the time when they have experienced and felt the discomfort and depressing influence of an acute catarrhal inflammation of the mucous membranes of the nose, manifested by hyperæmia and hypersecretion, sneezing and obstruction, complete or partial, to the passage of air.

Only by a little careful thought on this subject do we realize the import of a clean, unobstructed breath-way through the natural channel. If stenosis from an acute cold of short duration is so potent in depressing one physically and mentally, what must be the effects, physically and mentally, of one who has permanent nasal obstruction?

Nasal obstruction in infancy is a matter of serious importance, as it may, in extreme cases, lead to paroxysms of dyspnœa and pulmonary engorgement, or may subject the child to starvation through inability to nurse. Every physician of experience can recall cases of fretful, ill-nourished babes from this cause. The moment the proper supply of air is diminished, the whole economy suffers for nutrition from deficient oxygenation of the blood. Typical examples of this are seen by every practitioner in children suffering from adenoid growths in the vault and enlarged tonsils, which give rise to the peculiar stupid facial expression. These children will all give histories of impaired appetites, restless nights with nightmare, directly in proportion to the obstruction, and no class of cases will respond more quickly to permanent improvement than they when the stenosis is relieved. Many of these cases can be traced directly to disturbed digestion and faulty nutrition, while the majority in children are due to traumatism, scarlet fever, diphtheria and measles. He, who gives the subject attention, cannot help being impressed with the intimate relation existing between naso-pharyngeal obstruction and the general health, as manifested by the stupid expression, muffled voice, faded complexion, flabby muscles, pinched features, spare forms, treacherous appetite, rebellious stomach, with strong tendencies to neuralgia, headache, worry, and loss of memory. In all cases of nasal stenosis, some or all of these symptoms are met with.

Those that are most liable to nasal obstruction from hypertrophy apart from the causes mentioned are not, as may be supposed, those that live out and are exposed to climatic changes, but on the contrary, they are those who live in-doors, such as work in dusty factories, stores, shops, and crowded cities where they do not have sufficient exercise in the open air and sunlight.

Thus we find that these cases come principally from three sources, viz:—1st. Traumatisms as falls or blows on the nose producing displacement of the septum, leading to hypertrophy and stenosis. 2nd. Scarlet fever, measles and diphtheria are a very common cause of stenosis in the young, leading to hypertrophy of the glandular and epithelial structures. 3d. From those who are most closely confined and suffer from the want of exercise and sunlight. These points should always be kept in mind, as they furnish the key to successful treatment.

It is my firm belief from observation and experience, in some cases, that many infants are treated with all sorts of drugs and soothing syrups for colic, when there is nothing the matter but ear-ache, caused by nasal stenosis, and all that is required to give relief is to clear the nose and inflate the ear. Many cases of asthma and sick head-aches can be traced to hypertrophy of the turbinates. Perhaps the following cases will best illustrate my text in adult cases:

Case I.—Mr. W., age 37, locomotive engineer, was referred to me for treatment April 11th, 1892, and gave the following history. For five years he had been a great sufferer from headaches. During the last two years, he had gradually grown worse, necessitating his laying off occasionally. Until three months ago when he had a great tendency to go asleep in spite of the effort to remain awake. On awaking from one of these naps he could not tell where he was or what station he had passed last, nor could he tell whether he had orders to run or not. His firemen had to tell him where he was and what

*Read before the Mitchell District Medical Society, at West Baden, July 7 and 8, 1892.

his orders were before he could realize the situation. This so frightened him that he took a leave of absence for two months. On examination I found his left nostril completely filled with a spur and deflected septum. The posterior ends of both inferior turbinates were hypertrophied, filling up the post-nasal space. The anterior tip of the middle turbinate on the right side was much enlarged, forming a hard tumor pressing against the septum. The pharynx was very dry and covered with a tough tenacious mucus. He could get but little air through the right side and his hearing was impaired. I began the treatment by removing the large nodule of hypertrophied tissue with the snare and the septal spur with the saw. As soon as the stenosis and pressure were relieved and breathing re-established, the headache was gone with all of the other symptoms complained of. He has now been running his engine for six weeks with but one slight attack of headache which followed getting wet and cold on a night run.

This patient says he has not felt as well in five years.

Case II.—Mr. R., pastor of one of our principal churches, and a great worker in charity organizations, consulted me on May 25th, 1892, on account of difficulty of breathing through the nose and the loss of power to concentrate his mind on his work or on any subject for any length of time. He was very forgetful, and was constantly annoyed by things that formerly did not concern him. He had become despondent, a thing foreign to his real self. In his own words, "To perform my work is like the task of climbing a marble monument with no foot-holds and nothing to grasp." Rhinoscopic examination revealed two large masses of hypertrophied tissue almost filling the post. nares, projecting well down over the soft palate. The anterior portion of the inferior turbinates was swollen and pressed against the septum. On removing the masses with a cold snare the patient experienced great relief, and as the treatment progresses the symptoms gradually subside. The case is still under treatment.

Case III.—On Feb. 8th, 1892, Mrs. O'B. was referred to me for examination. She had suffered repeated attacks of sick headache, more or less, for fifteen years, and had suffered no other sickness except that incident to child-birth. She stated that during the last three years her malady had gradually grown worse, so much so that during the last year she had developed a fear of becoming insane. She stated that during the last five years she thought she had spent as much as one day each week in bed from this cause. She also stated that at various times during all these years she had been treated for what her family physician called female trouble, to which he ascribed the headache, although he had never made an examination. Examination in this case revealed a hard tumor-like nodule, the size of a hazlenut, embracing the anterior end of the right turbinate body, pressing hard against the septum. There was some hypertrophy of both middle and inferior turbinates posteriorly, sufficient to cause stenosis when in the recumbent position. She, too, complained of lassitude, weariness and despondency. I removed the tumor with a snare and cauterized the hypertrophies, and to use her own language, "My happy girlhood disposition has returned." This case was under observation to May 15th, a period of over three months, up to which time there had been no recurrence of any of the old trouble.

I might extend these remarks to many like cases, but having already tired your patience, I will leave the subject with a plea for more rhinology and less stereotyped prescribing.

SALIPYRIN.

This body is a chemical compound of phenazone (antipyrin) and salicylic acid. In every one hundred parts there are 57.7 phenazone and 42.3 salicylic acid. It is prepared at the chemical works of Mr. J. D. Riedel, of Berlin, and has lately been introduced as a remedy which combines the physiological action of phenazone and that of salicylic-acid. There are some particulars in which salipyrin is said to differ advantageously from either of its constituents. It is stated that salipyrin is therapeutically effective without producing any functional disturbance. It occurs in the form of very small colorless crystals; the taste is not at all unpleasant, and may be described as slightly astringent and acid. It is very sparingly soluble in water, freely in alcohol. On account of its insolubility in water salipyrin is best administered in its compressed state or in cachets.

A FEW NOTABLE REMEDIES.*

By S. E. MUNFORD, M. D.,
PRINCETON, INDIANA.

Strychnia.—As this remedy is usually prescribed, I doubt if we are ever sure of benefit from it. It is believed to be a tonic in worn-out nervous conditions and to aid in the treatment of gastro-intestinal troubles. It is prescribed in doses from $\frac{1}{60}$ to $\frac{1}{100}$ of a grain, combined usually with iron and the bitter remedies. To learn to respect the drug we need to give it in a case of acute general chorea, according to the dosage instituted and practiced by Trousseau, or as near thereto as the courage of the practitioner will allow. He dissolved one grain of the sulphate in twenty teaspoonfuls of syrup (℥iiss), each teaspoonful containing therefore $\frac{1}{20}$ grain of the salt. With children, according to the age, he administered at the beginning from one to three teaspoonfuls per day. The doses to be given at equal intervals of time during the day, so the effect may be watched. If the dose of three teaspoonfuls each day is well borne it is continued for two days and increased by one teaspoonful. After another two days the dose is increased by another spoonful, and so on until six teaspoonfuls are taken in the course of the day, *always at equal intervals of time.* When this dose has been reached two teaspoonfuls are given three times a day and increased according to the rules of the first course. Then a teaspoonful ($\frac{1}{3}$ grain) may be given and pushed until three, four or even five of these doses are given per day. In the case of adults the dose from the beginning may be two teaspoonfuls and increased to two grains of the drug daily. The administration of the remedy attended by the closest surveillance should not be stopped short of the physiological effects. When the patient complains of some stiffness of the jaws, slight giddiness, or stiffness of muscles of neck and back, the ascending scale of dosage should be stopped, and if the choreic manifestations are disappearing the dose may be lessened. I have never had occasion to reach the outer limits of administration of the drug according to Trosseau's rule, for the reason that my cases have yielded before that limit was reached. The doses are heroic and the method has been denounced as dangerous. I am satisfied from my own observation that an individual with a violent attack of chorea is wonderfully tolerant of the drug. It is pretty safe to follow the master clinician.

Morphia.—I have only to remark with reference to this drug that it is given usually in larger doses than are needed to secure the desired effect. When we deal with spasmodic, hepatic, or renal colic a full dose is imperative. In a majority of the cases in which morphia is administered one twenty-fourth of a grain will be found to be sufficient. One-fortieth or even one-sixtieth of a grain will relieve moderate pain and quiet a bed-wearied patient. I spent last summer in bed and had some experience with this remedy. Two grains of the sulphate of morphia were sufficient for the pains and weariness of the entire attack. I use the hypodermic tablets for internal use, grain $\frac{1}{4}$, and divide into the dose I may want by teaspoonfuls of water.

Phosphate of Soda.—This drug is cholagogue in effect. If continued in sufficient doses it increases the biliary flow. It is helpful in all cases of gastro-intestinal catarrh. In the duodenal catarrh of children attended with mild fever and slight jaundice, ten to twenty grains of the phosphate in solution, repeated several times a day, give relief. I call up the remedy on this occasion to say that it is the one reliable agent in all the list of remedies for the prevention of the inspissation of bile and the crystallization of cholesterine, resulting in the formation of gall-stones. It will not relieve the pain occasioned by a calculus in its exodus from the gall-bladder. It will not dissolve concretions already formed; but given continuously in large doses—six to eight drachms daily—it will certainly stop the formation of bilary concretions and cure the patient. A few years since I saw a woman who had suffered for two years with frequent recurrences of hepatic colic. Gall-stones had been passed, leaving no doubt as to the diagnosis. The patient was reduced in flesh, bore food badly, and was thoroughly dyed with the bile stain. Several good practitioners had seen her as consultants at different times, and I said to the attending physician: "There is no opportunity for me. You have with the aid of these men doubtless compassed the whole field of

* Read before the Mitchell District Medical Society at West Baden, Indiana, July 7–8, 1892.

therapy." But when he told me of the remedies used phosphate of soda was not in the list, we gave this remedy and cured the patient.

To Roberts Bartholow we are indebted for having indicated to the profession a remedy well-nigh magical in preventing the formation of biliary concretions.

HYPNOTICS.

By E. P. EASLEY, M. D.,
NEW ALBANY, INDIANA.

I wish to disclaim at the outset the knowledge of anything new in hypnology. My experience with these agents has doubtless been quite similar to yours, but by giving you my views of them your own will be strengthened or confirmed, and in this way I trust my remark may be of benefit to you.

We are often confronted with cases where it is imperative to produce sleep, and the choice of a hypnotic then becomes a matter of great moment. The list of somniferous drugs is long and quite a number of them reliable, but no one of them is applicable to all cases or ages. So many things must be considered in making a selection that the question is indeed one of great perplexity. We desire to give an opiate for instance. Constipation may exist as a contra-indication, or the patient may be intolerant of opium in any of its forms. Again, a weak heart may contra-indicate the employment of chloral or sulfonal. Paraldehyde and somnal are so often repugnant to the taste as to be inadmissible, and so on by exclusion every hypnotic may be eliminated from the list. Here we can only make choice of the least evil, select the agent having certain merits and demerits, it is difficult to decide which is the most valuable, which one is acceptable in the greatest number of cases. Bromidia should have, perhaps, first place with sulfonal a close second. The former, containing cannabis indica, a heart tonic, can be pushed further than can chloral alone owing to its depressing powers.

Sulfonal in doses of 20 to 40 grains often acts magically. It frequently fails altogether however. It should be given in solutions, or it may pass entirely through the alimentary canal undissolved. This I have frequently observed. It should be administered four to six hours before bedtime as its action is slow. It has the disadvantage of being followed by stupor and muscular exhaustion continuing through the following day and besides is not altogether free from danger, great depression sometimes following its use. When sleeplessness is due to pain, then opium or some of its preparations is the remedy. Morphia given hypodermically is the best. Papine is a most excellent form of opium, being almost wholly free from the disagreeable features that attach to the other preparations of this drug, and is well tolerated by very young children. One drachm of it is equivalent to an eighth of a grain of morphine. It acts peculiarly well in the wakefulness of lying-in women.

The syrup of Dover's powder I have found to act well as a hypnotic in typhoid fever. Codeia is not reliable and makes the throat and tongue very dry with a disagreeable taste.

Antifebrin has some hypnotic properties, and by relieving pain invites sleep. The same is true of the other analgesics.

Paraldehyde is seen at its best in the wakefulness of delirium tremens. Its nasty taste is unbearable to any one in his senses. Chloralamid in 20 to 40 grain doses is a favorite with some, but I have never found it effective. Bromide of potash scarcely deserves the name of a hypnotic, though as a placebo it may be of some use.

We have no ideal hypnotic unless it be, according to the newspaper paragrapher, the modern sermon. If we believed him, that is almost sure to "weigh the eyelids down and steep the senses in forgetfulness," and is more potent than all the drowsy syrups in the world. Then there are no contra-indications to its use. It is applicable alike to young and old. It has no disagreeable after-effects. It begets no *habit*, is easy of administration, and is cheap enough, being had without money and without price.

We should always bear in mind that there are many auxiliaries we may employ to aid the action of hypnotics. The condition of the bed should be made comfortable, the light and temperature properly regulated, company excluded, and any noise prevented, and the patient advised that his medicine is given for the purpose of producing sleep.

*Read before the Mitchell District Medical Society July 7th, and 8th, 1892.

Society Reports.

MITCHELL DISTRICT MEDICAL SOCIETY.

Twenty-second Annual Meeting Held at West Baden, Indiana, July 7th and 8th, 1892.

FIRST DAY—AFTERNOON SESSION.

The Society convened in the hall of the West Baden Hotel, and was called to order at 2 P. M., by the President, Dr. E. S. Elder, of Indianapolis.

After the transaction of some miscellaneous business, the reading of papers was proceeded with. The first paper read was by Dr. C. W. Murphy, of Salem, Indiana, entitled

THE COAL TAR DERIVATIVES; THEIR USE AND ABUSE.

Antipyrin, acetanilid, antikamnia and phenacetine being the most frequently used and important of the newly discovered chemical agents, the speaker's remarks were confined principally to their consideration. Antifebrin and acetanilid are the same articles under different names. When the physician prescribes acetanilid he gives its pharmaceutical name; when he prescribes antifebrin he gives its proprietary name; the former is very cheap, the latter more expensive. Both are said to possess the same therapeutical effects, but a somewhat extended use of each one leads the author to believe that for uniform activity antifebrin is the more reliable. As there are no restrictions on the manufacture of acetanilid it is easy to understand how, as in the manufacture of other drugs, an impure article is sometimes placed upon the market.

All of these agents come under the head of anodynes or analgesics, possessing the property of lessening the sensibility of the nerve centers or their peripheral extremities, but in varying degrees. They are also antipyretic in action, and it should never be overlooked that their effect on the system when fever is present is much more powerful than when it is absent; that doses of considerable size can be given for the relief of pain with impunity in the absence of a rise of temperature, that would bring on a fatal collapse in high febrile conditions. While opium will always stand at the head of anodynes, its objectionable features of generally inducing constipation, cephalalgia, nausea and deranged digestion cause us to make use of the less harmful remedies for the relief of pain in a large class of ailments. As an anodyne, antipyrin he believes to be the most powerful of all the aromatic series. It is especially useful in rheumatism as a palliative in relieving pain, reducing the temperature and procuring sleep at night. In facial neuralgia, migraine, sciatica, pruritus and neuritis it is an excellent remedy for the relief of the pain. The dose should be ten or fifteen grains, and if the pain is not relieved in one or two hours, repeat the dose. Antikamnia, acetanilid and phenacetine are also useful in hemicrania; and all four can be depended upon for the certain relief of hyperæmic headaches. The speaker has many patients who prevent paroxysms of sick headache by one or two doses of antifebrin of six to eight grains each. Some get relief from antipyrin when antifebrin fails. He had used phenacetine in a number of cases of pertussis, and believes it serves a useful purpose in diminishing the severity and frequency of the paroxysms of coughing. For the relief of enteralgia, gastralgia, and other nervous affections of the bowels, dependence cannot be placed upon any of these; but antikamnia has given relief in a number of cases of the lighter forms of these affections. All of the series have a wide range of usefulness in the treatment of *la grippe* in relieving the severe muscular and neuralgic pains and in reducing the fever. He had cured in three days an eighteen year old girl affected with choreic movements of the left arm, neck and face of uncertain ætiology by giving ten grain doses of antipyrin three times a day. He had also used antifebrin and antipyrin successfully in ten to twelve grain doses in simple nervous insomnia.

The use of all antipyretic remedies must be persisted in until the desired end—the reduction of temperature,—is secured; but the peculiarities of each patient must be studied and these agents must be administered in a way to suit each individual case. A dose that would give the desired result at one period of a disease might prove insufficient or excessive at another period; and a dose that would lower a temperature to the required degree in one individual might require double that amount to get

the same result in another. Many authorities recommend giving five to ten grains regularly every three or four hours. This practice should be deprecated, for such a quantitity is likely to disintegrate large numbers of red corpuscles, cause blueness of the lips, cold extremities, excessive sweating, subnormal temperature and such untoward effects would more than counterbalance the good accomplished. It is well known that in nearly all fevers there is an evening exacerbation; usually the fever rapidly declines after midnight, and does not rise again until 10 or 11 a. m., and sometimes not until 2 or 3 in the afternoon. A powder of seven or ten grains in the morning when the temperature has risen to 103° will generally keep it down below the point until 7 or 8 p. m., and occasionally it is sufficient for the twenty-four hours; but if it comes up again any time in the afternoon or evening another dose is given. Should one dose fail to make an impression on the fever, which but seldom occurs, the author gives another dose at the expiration of two hours. In this manner, with from one to three doses the temperature in almost all fevers is easily maintained below 103°; and as already stated, it prevents undue tissue waste, lessens nervous irritability, promotes sleep, prevents delirium and complications, and therefore lessens the mortality.

The essayist in conclusion said that the opinion was entertained by many that the antipyretic form of medication does more harm than good; but he believes that such a conclusion is based upon improper dosage and too frequent administration.

Dr. William Bailey, of Louisville, has not prescribed antipyrin for years because of the disagreeable effects observed following its administration. He does not prescribe antikamnia because it is not strictly one of the coal tar derivatives, but a made up preparation, and ought not, in his opinion, be prescribed. He uses phenacetine more frequently than all of the others together for the reduction of temperature, and gives it without hesitation under all circumstances. His method in treatment of typhoid fever is to take care of the patients, feed them carefully, treat them with phenacetine and salol, and disinfect the alimentary canal by the nitrate of silver.

Dr. E. D. Laughlin, of Orleans, Indiana, thought the profession was down on antikamnia and it had a right to be; that its antipyretic properties are entirely owing to the amount of acetanilid that it contains, 75 per cent. of acetanilid, and 25 per cent. of bicarbonate of potash, the preparation being made by a firm in St. Louis. He found penacetine an excellent thing in pertussis and whooping cough when properly administered, three times a day. He had been able to control the paroxysms of cough with it. In typhoid fever he uses acetanilid in connection with other drugs. As an antipyretic he uses it almost exclusively. He has no disposition to change for the reason that it gave him satisfaction. He thought if bicarbonate of soda with acetanilid had been taken together in the case mentioned, the headache might have been relieved.

Dr. J. M. Mathews, of Louisville, could see no justifiable reason why antikamnia should be ruled out of the list of remedies mentioned, because it is a combination and put up by some house in St. Louis. The speaker said he had been a sufferer from periodical headaches all his lifetime; he had tried the coal tar derivatives, some of them acting fairly well, others doing him injury, but antikamnia in his own case had given entire satisfaction, so much so that when he has an attack he can stop it almost instantly with antikamnia in 15 or 20 grain doses.

Dr. James T. Ball, of Judson, Indiana, does not use the preparation of antikamnia as put up by the St. Louis firm, but makes a combination himself. It is cheaper, and he considers it the safest of all the preparations he has used. To four ounces of acetanilid, he adds one ounce each of bicarbonate of soda and salol, triturating thoroughly. This combination is identical both in appearance and effect with the preparation manufactured in St. Louis.

Dr. Dudley S. Reynolds, of Louisville, said the paper awakened in his mind a consideration of the whole subject of the treatment of the inflammatory, zymotic fevers, antipyresis, etc. In 1882 a discussion of Brand's method of treating typhoid fever was extensively indulged in by the French Society for the Advancement of Science. An eminent Frenchman had been making experiments with salicin, quinine, and some of the other alkaloids of the cinchona bark. All the great clini-

cians of France took part in the discussion. The impression was that high temperature means disintegration of tissue; it means the active processes of fermentation, carefully studied most all the remedial agents employed against these processes will convince one that they are in the nature of anti-ferments. In the chronic inflammations of the so-called rheumatic people, especially the chronic inflammations of the ciliary body of the iris, all the different kinds of medicine used in the treatment of high temperature had been tried—all the eliminating agents, all the depleting agents and mercurial drugs, which had so long been in high esteem by the profession had almost entirely passed out of use. We now find phenacetine, salol, salicylate of sodium, and more rarely pilocarpine bring about not only reduction of pain, discomfort, and of the general bodily temperature, which is always elevated in inflammations of the ciliary body, but actually dissipate the inflammatory process by opening up the lymph channels and tubes by destroying the ferment that occludes them, whether by dissolving some morbid effusion or by general diffusion it is difficult to say, yet the conviction in the minds of Frenchmen was that antipyretics are after all anti-zymotics, those agents which arrest fermentation.

Dr. E. S. Elder, of Indianapolis, expressed his appreciation of the paper, and was glad that the author had taken such a bold stand in favor of antipyretic medication, as he believed that an unfounded prejudice had been created against their use by certain members of the profession who claim that antipyretics assist in producing heart failure. He believed that the injury charged to antipyretic medication resulted from continued high temperature, which meant increased metabolism or a burning up of the tissues, which of itself was disintegrating, and weakening. Dr. Elder uses phenacetine largely in the place of antifebrin. Antipyrin he had not used for some time. He relies both upon acetanilid and phenacetine. He considers it good practice in the use of antipyretic remedies to combine with them some heart tonic, such as strychnia or digitalis.

Dr. C. W. Murphy, of Salem, said if there was depression of the heart he used a cardiac tonic, otherwise not. He sometimes uses digitalis and nux vomica in combination. The principal reason for th condemnation of antipyretic medication by certain members of the profession he thought was due to an improper administration of the remedies themselves; that they were given in too large and frequent doses.

Dr. S. H. Charlton, of Seymour, Indiana, asked Dr. Murphy in what doses would he consider it safe to use these remedies, and how often. His experience was in favor of giving them in small doses. Five grains of antifebrin were as many as he gives, repeated every three or four hours. He had treated cases in the country by sending these remedies in connection with other medicines without seeing the cases. He also desired to ask whether the essayist or any other gentleman had used antipyrin or any of the coal tar derivatives in the treatment of cerebro-spinal meningitis.

Dr. Murphy said he did not use phenactine in the treatment of any kind of fever, that it was dangerous on account of its depressing effect upon the heart. As stated in the paper, he uses antifebrin in reducing the fever. When the temperature reaches 103° he gives it in from seven to ten grain doses according to the physical condition of the patient. Five or seven grains he considers sufficient in ordinary cases to reduce temperature. If it does not reduce it in two hours, he would repeat the dose. He had had no experience with antipyretics in treatment of cerebro-spinal meningitis.

Dr. William Bailey, of Louisville, thought phenacetine the safest remedy to give so far as the heart is concerned; but if he apprehends heart failure, instead of giving strychnia, he gives caffein.

Dr. E. P. Easley, of New Albany, Indiana, was surprised to find that antikamnia had so many friends, as he thought it was a therapeutical outlaw. He reported the case of a young lady, 22 years of age, weight 165 pounds, in robust health, where, by mistake, 24 grains of antikamnia were given for an ordinary headache with fatal result. He was firmly convinced that all antipyretic remedies should be prescribed with great care.

Dr. Dudley S. Reynolds, of Louisville, remarked in regard to dosage, that in an acute attack of iritis or cyclitis in a patient able to go about, or who had no heart complication, one or two grains of phenacetine every hour would in about

twenty-four hours dissipate all manifestations of the inflammation in many instances. Of course, it was not always uniformly successful. He believes that small doses frequently administered will bring about the desired effect with more certainty and uniformity and with less danger to the heart.

Dr. William Cheatham, of Louisville, read a paper entitled

THE EFFECT OF DISEASES OF THE EAR UPON THE GENERAL CONDITION (see p. 256).

Dr. F. C. Heath, of Indianapolis, Indiana, read a paper entitled

PRACTICAL SUGGESTIONS TO THE GENERAL PRACTITIONER IN EAR TROUBLES.

The purpose of the paper was to give a few suggestions in the management of ear troubles necessarily treated by the general practitioner, such as foreign bodies in the ear, earaches and purulent discharges from the ear.

The foreign bodies most likely to be found in the ear are, in adults, forgotten masses of cotton and various insects; in children, pebbles, beads; corn, beans, and other articles put in the ear by the little patients themselves or their companions. Such cases are very likely to fall into the hands of the family physician. What is he to do with them? The most useful and effective instruments for the removal of these bodies is the syringe. Warm water should be used, and it should be gently injected. By this simple means the majority of foreign bodies may be quickly and safely removed from the external auditory canal. An effort should be made to direct the water to one side of the object that we may get on its return a *vis a tergo*. Otherwise the force of the water may carry the body farther into the canal. This danger is still greater in case of objects so large as to fill the lumen of the meatus. Straightening the canal by pulling the auricle a little upward, outward and backward will facilitate matters. Beans, corn and other articles likely to swell from contact with water should either be removed altogether with instruments (hooks, scoops, and forceps), or, if the syringe is used without success, there should be no delay in resorting to instruments. Insects may often be killed by solutions of chlorinated soda or choloform previous to removal with syringe, if the hook-like appendages of larvæ becomes so attached to the tissues that syringing fails they may be picked out with forceps. While foreign bodies may cause trouble by exciting pain or inflammation, this is far less common and less serious than that produced by injudicious and unsuccessful efforts at removal. Destruction of the drum-membrane, injury to the ossicles, loss of hearing, facial paralysis, and even death resulted in these cases. It behooves the surgeon, therefore, to see what he is doing and proceed with care. The canal must be well illuminated and instruments manipulated in such a way that objects may not be pushed, or allowed to slip further in. If unable to come up to these requirements and where the syringe fails, the good of the patient as well as the reputation of the physician and of the general profession require the transfer of the case to more competent hands.

Accumulations of hardened wax may be removed usually according to the rules already laid down, but some cases will require the previous use of an alkaline solution or other means for softening the mass.

A more frequent trouble in the practice of the family doctor is earache, often very severe. This may be neuralgia from the teeth or other causes, in which case removal of the cause and anti-neuralgic treatment are indicated. But far more commonly it is due either to acute inflammation of the middle ear or furuncle of the external auditory canal. The greater pain, tinnitus, and impairment of the hearing in the former affection will aid in differentiating—also inspection of the canal and drum head. It a fatal mistake to regard the earaches of children as trifling—so many of them are attacks of acute inflammation of the middle ear, resulting in more or less impairment of hearing, and in some cases, of course, still more serious affections follow both in children and adults. The remedies used for these troubles are numerous and various. Some of the most disgusting are skunk oil and human urine. The means most effective both in furuncle and otitis media are heat and blood-letting. Heat may be applied in various ways—blowing in the warm breath, or dropping in hot water with a medicine dropper, answer well in many cases. A hot water bag placed against the auricle is very efficient; a simple substitute is a hot water bottle wrapped in a towel or napkin against which the ear may

be laid. But perhaps the best method in middle ear inflammation is douching the ear with hot water from a fountain syringe for ten or fifteen minutes at a time as required for the relief of pain. This should not be overdone on account of the macerating tendency on the drum-membrane, and the liability in furuncle to produce diffuse inflammation.

When hot applications fail, blood-letting should be resorted to. One or more leeches should be applied to the tragus (in front of the ear,) not to the mastoid unless that is diseased. They give great relief in middle ear troubles, but often fail in furuncle. The latter trouble may be relieved by painting with tincture of iodine or a 20 per cent. solution of menthol in benzoinol. We may incise, or preferably puncture, early in the case, with less pain to patient after the formation of pus. In either affection morphia and atropia solutions may be used, although not very reliable as a rule, nor so effective as the measures already suggested.

Purulent discharges from the ear trouble the general practitioner as well as the specialist. The origin of this discharge is sometimes in the external canal, but far more often in the middle ear. The doctrine that we should not meddle with the ear, that the discharge is salutary and not to be checked, is a pernicious one held not only by the laity, but also by some of the profession. The fact is these discharges are often serious—caries of bone, meningitis, cerebral abscess, pyæmia and death are among the possible sequelæ. Pyoktanin is said to be effective in this affection. In using this, as well as silver solutions, care is necessary to avoid staining the clothes or person of the patient. Peroxide of hydrogen is contra-indicated in acute troubles of the ear, but very successful in chronic discharges. Although it is often used in full strength, the essayist prefers to dilute it, having seen it on one occasion produce severe inflammation.

But the question may occur to some practitioner, "shall I use the Politzer air-bag or other means of inflating the middle ear in these cases of earache and purulent discharges?" Many a routinist thinks of this as a remedy for all ear troubles just as he does of digitalis for the heart and atropia for the eye. Inflation is indeed valuable in many of these cases, but it should be used with care and moderation. In purulent affections it is an aid in cleaning out the ear and in earaches from acute (or subacute) otitis media it may be found of service. Inflation should be made gently and tentatively at first (if at all) in the acute stages of these troubles lest they be rendered worse instead of better. But often by opening up the eustachian tube, dislodging pus, mucus or serum, restoring the memorana tympani to its normal position and equalizing the air pressure on both sides of the membrane, pain is relieved and inflammatory products are absorbed. This may be accomplished either by the Politzer or the Valsalva method, the latter consisting in puffing out the cheeks forcibly with nostrils and mouth closed. Sometimes the reverse is of benefit, swallowing with mouth and nostrils closed, thus causing a partial evacuation of the contents of the middle ear, air, serum, mucus or pus.

These suggestions are offered not as an exhaustive or technical discussion of the subject, but in the hope that they may not be entirely without practical value to the general practitioner in treating the common forms of ear troubles coming under his charge.

Dr. L. C. Cline said that ear cough, referred to by the essayist (Dr. Cheatham), was frequently overlooked by the general practitioner, who treated cases for months without benefit, thinking the trouble was in the throat or bronchial tubes. He reported the case of a school teacher, who had been treated for nine weeks without benefit. Her cough was so bad that she could not sleep until after 12 P. M., without some anodyne to relieve it. Examining the ear he found it impacted with wax and suppurating. He touched the ball of wax with his probe and the patient screamed. The cough he thought was due to the wax in the ear as its removal was followed by relief of all the symptoms. He had seen other cases.

Dr. S. E. Munford, of Princeton, Indiana, mentioned a case of chronic suppuration of the ear in which he cleansed the ear with peroxide of hydrogen. About a week thereafter he had to chisel open the mastoid cells. He believed that the peroxide forced purulent matter into tne mastoid cells.

Dr. Dudley S. Reynolds said, that while the syringe was useful in removing foreign bodies and accumulations of pus

from the ear, it was, at the same time, attended with danger, and corresponding importance should be attached to subsequent inflation by the Valsalva or some other method.

Dr. S. H. Charleton said, in the few cases of suppuration of the middle ear that had come under his observation, he had perforated the drum and evacuated the pus early, the patients doing well. He had seen bad effects in some cases from negligence, but never saw a person die from suppuration of the mastoid.

Dr. C. W. Murphy asked Dr. Heath in what form he used boric acid, whether in powder form or solution.

Dr. Heath replied that he used it in powder form in the chronic cases. In the acute cases, if the suppuration did not yield quickly to cleansing measures, he would resort to it as in the chronic form.

The papers were further discussed by Drs. Yost, Cheatham, Reynolds, Cline, Ball, and Bailey.

Dr. L. C. Cline, of Indianapolis, then read a paper entitled: THE EFFECTS OF INTRA-NASAL OBSTRUCTIONS ON THE GENERAL HEALTH. (see p. 259.)

Discussed by Drs. Cheatham, Charleton, and Cline.

Dr. E. P. Easley, of New Albany, Indiana, followed with a paper entitled HYPNOTICS. (see p. 262.)

EVENING SESSION.

The Society was called to order by President Elder at 8 P. M. Dr. Dudley S. Reynolds, of Louisville, took the chair and Dr. Elder delivered the President's Address.

He said that one of the most important considerations in connection with the meetings of the Society was to make them practical. The prime object should be to give the greatest amount of practical information, so that every member will learn something that he can at once utilize in his every-day work. Dr. Elder then presented some thoughts relative to recent studies and teachings in medical science during the last year.

The past year has witnessed marked growth in many departments and a definite solution of many problematical questions.

One year ago he presented to the Society a paper defining recent views regarding pyrexia, hyperpyrexia and fever; that while animal heat was considered to be the result of metabolisms, yet it was directly influenced and controlled by the nervous system, and that the thermogenic function of the nervous system was one of its most important. This thermogenic function consists of three factors, viz., heat production (thermogenesis), heat radiation and loss (thermolysis), and heat regulation or thermotaxis; that a disturbance of either of those functions produced pyrexia or hyperpyrexia. And further that these thermic disturbances alone were not fever, but that fever came on in connection with pathological conditions other than these variations of temperature. Those views have passed into the domain of accepted verities. We know that the mere presence of abnormal heat is not the measure of the pathological process. We may have an exceedingly high temperature from retarded thermolysis, heat production being small but its escape retarded and a high temperature results. On the other hand, heat production may be enormous and its radiation equally rapid, consequently a high temperature does not ensue, yet our patient is most dangerously sick.

The most important advance in medicine during the last twelve months has been in the department of bacteriology. This vast field now yields fruits which are rapidly controverting old opinions and establishing on logical and firm foundations a new ætiology, pathology and therapeutics.

Dr. Elder then laid before the Society the very latest precise knowledge on the subject of bacteriology, as set forth only a short time since by Dr. Geo. M. Sternberg, of Washington, after which he passed to the examination of a few more pathological conditions in the most advanced light of modern research. He called particular attention to erysipelas and diphtheria. Erysipelas has always been the source of controversy, its ætiology and therapeutics were unsettled and unsatisfactory. Recent pathologists place it among the contagious, infective, specific diseases. That it is a disease of microbic origin seems incontestable. The contagiousness of erysipelas has been recognized for centuries, and on this account early attempts were made to include it among microbic diseases. The speaker touched upon the discovery of the streptococcus of erysipelas by Fehleiasen in 1883, gave a description

of it, and then dwelt at length upon inoculation experiments, the manner of infection, and the relation of erysipelas to phlegemonous inflammation and suppuration.

Viewing erysipelas as a microbic disease the treatment resolves itself into two prominent indications: (1) The destruction of the specific micro-organisms and prevention of its extension; and (2) the protection of the patient from ptomainic infection and from the invasion of putrefactive bacteria, and the general treatment to relieve the ordinary phenomena of inflammatory diseases, pain, fever and functional disturbances of the various organs. As remedies to destroy the specific microbe and to protect against the invasion of putrefactive bacteria, the remedy *par excellence* is bichloride of mercury. Layers of cotton wool saturated with a warm solution of bicloride of mercury 1-3000 to 1-5000, applied over the inflamed surface and covered with oil silk is the ideal local remedy. The speaker urged this treatment in lieu of all the various poultices, washes, paintings, coverings or other applications so freely and indiscriminately recommended without any definite conception of their utility.

To fulfill the second class of indications, viz., to protect against ptomainic infection either from the specific germ, or that of putrefaction, and from the effects of functional disturbance of the various organs, there is nothing better than these remedies which experience has so positively proven beneficial, viz., iron, quinine, and supporting measures. These should be given freely and constantly. Opium to relieve pain, antipyretics to control fever, digitalis and strychnia to sustain the heart, cholagogue cathartics to secure excrementitial hepatic function, diuretics if needed to assist the kidneys in eliminating effete matter, stimulants and supporting measures, are all indicated, as a matter of course, in this as in all maladies of a febrile nature. His plea is especially for the antiseptic local treatment, earnestly and intelligently applied, thereby saving much constitutional disturbance, thus avoiding the necessity of much systemic medication.

Passing to diphtheria we enter a most interesting field. Its history dates back to the times of antiquity. Nothing in the history of medicine has more clearly shown the progress towards an exact science than the study of this subject. There can no longer be any differences as to the disease being primarily a local or a constitutional one. It has been clearly proven beyond a question that a rod-shaped bacillus, first discovered by Klebs, alighting upon a susceptible mucous membrane, produces the characteristic local lesions. It has also been proven with equal certainty that the bacilli found in the diphtheritic exudate produce a chemical poision, and it is this that induces the constitutional symptoms.

Histological changes. We owe largely to the labors of Wagner, Weigert, and more particularly to the splendid work of Œrtel, our knowledge of the minute changes which take place in diphtheria. According to Œertel "The diphtheria poison induces first a necrosis or death of cells with which it comes in contact, particularly the superficial epithelium and the leucocytes. The deeper cells of the mucosa and of the other parts reached by the poison may be affected. The second change is a hyaline transformation of the dead cells, or as Weigert terms it, the production of coagulation necrosis. The bacilli excite inflammation with the migration of the leucocytes, which are destroyed by the poison and undergo the hyaline change. The superficial epithelial layers undergo a similar alteration, and when we know as the *false membrane*, represents an aggregation of dead cells, most of which have undergone the transformation into hyaline material. This is in all probability a conservative process, by which, in a measure, the poison is localized and prevented from reaching the deeper structures. The laminated condition of the exudate is probably produced by the inflammation of different layers. The formation of these foci of necrobiosis, starting from the epithelium and proceeding inward, is, according to Œrtel. the distinguishing characteristic of diphtheria. The action of the poison is by no means confined to the superficial mucosa on which the bacilli grow. Although they do not themselves penetrate deeply the contiguous bronchial glands show extensive foci of necrosis. In severe cases these necrotic areas are found in the internal organs, in the solitary glands of the intestines, and in the mesenteric glands."

The treatment of diphtheria consists of

three factors: 1, prophylaxis; 2, general treatment, and 3, local treatment. Cases of diphtheria should always be isolated. Clothing, utensils, play things, books, and other articles having been in contact with them should be carefully disinfected. Boiling, fumigation with sulphur, soaking and washing in the bichloride solution are the measures to be depended on as prophylactic agents. Persons liable to exposure should use antiseptic mouth washes, etc. The two prime indications in the general treatment of diphtheria are first to prevent or limit the local develment of the specific bacilli, and second to combat the effects ef the toxic materials which they produce. The most important factor in controlling the disease is the local treatment. Antiseptic washes, douches, sprays, and gargles are invaluable. Bichloride of mercury is the remedy *par excellence*, one to three or five thousand, used freely, often and assiduously offers us the most hope. Have patients to gargle every half hour bringing the fluid in contact with all the inflamed area and pseudo-membrane. A most important part of the treatment is to bring the medicine in contact with the specific bacilli. Frequently this can only be done by dissolving the false membrane. For that purpose, applications of lactic acid and lime water, vegetable pepsin (paypayotin) and trypsin. Lactic acid and lime water, two drachms to 6 ounces, and trypsin and water, 30 grains to one ounce. These are the speaker's favorites.

Dr. U. H. Hon, of Bloomington, Indiana, followed with an address entitled "The Outlook of Life To-Day." It was instructive and interesting.

Second Day—Morning Session.

The Society was called to order at 10 A. M. by the President.

Dr. Joseph M. Mathews, of Louisville, read a paper on

"How To Deal With Fistula In Ano."

He had once heard the elder Allingham remark that in his opinion "it required more surgical knowledge and dexterity to operate on and cure a complicated case of fistula in ano than any other surgical affection." The more Dr. Mathews met with this very troublesome disease the more he was persuaded of the truth of Allingham's assertion. Too little attention was given by authors of books to the details of the operation. He knew that the elastic ligature had strong advocates in Dittell, Allingham, and others, but the procedure seemed so unsurgical and withal so unsatisfactory, that but few surgeons had given the plan much endorsement. The more he used the elastic ligature in the treatment of fistula in ano, the less he liked it. When compared with the knife in operating for fistula, all other methods must suffer by the contrast. What can be accomplished by the knife in a few minutes, it took days or weeks for the other plans of treatment to do. Edges of wounds can be trimmed, additional sinuses sought for and divided, the bottom of all cut through, antiseptic surgery practiced, and a perfect cure effected, when the knife is used.

Dr. Dudley S. Reynolds, of Louisville, followed with some remarks on "Abscess in the Attic of the Ear."

Dr. S. E. Munford, of Princeton, Indiana, read a paper entitled "A few Notable Remedies." (See p. 261.)

Dr. Allen Pierson, of Spencer, Indiana, read a paper on the Treatment of Varicocele. He referred to the recent monograph of Dr. G. Frank Lydston, of Chicago, in which some thirty or more operations were mentioned for the radical treatment of varicocele, nearly all of which were named after the operator who had been the chief promulgator of some particular phase of the operation. Nearly all of these methods seek to obliterate the diseased veins. The object of some was to make a suspender of the scrotal tissues and by relieving the tension of the dilated veins give them the opportunity to recover their normal tone. These might be properly classed among the palliative methods.

Leaving out of consideration those methods in which caustics, remedies to coagulate the blood in the veins and electrolysis are the agents employed to secure obliteration, the other purely radical methods seek to obliterate the veins (1) by subcutaneous deligation, (2) by open deligation, and (3) by open deligation with excision of a portion of the diseased veins. A clear understanding of what is to be done and the simplest and safest manner of doing it were necessities, especially to one whose practice was private,—away from the hospitals or public institutions of any kind,—in the homes of the people. The dread of operations on varices no

doubt arose, in part, from the results in such methods as Vidal's or Ricord's

With simplicity and safety in view we avoid making extensive incisions in a location where they become peculiarly a source of danger unless there existed some abnormality. In the normal arrangement of the veins and in subjects where there are no calcareous deposits in this location there ought to be no difficulty in isolating the veins from the vas deferens with its attending artery; this being done subcutaneous deligation ought to be as easily accomplished as ligation in the open method. The speaker then went over the steps necessary in subcutaneous deligation, and closed by saying that the comfort of the patient, the freedom from complication, and the success of the operation depended upon cleanliness in a great measure; that in a few cases that had fallen to his lot to treat in this manner the secondary operation had been needed in none, and the operation had been ideal to all, and it was only because the tendency of the practice in these cases seemed to be in the direction of the open methods that this method was thus spoken of that it might, in some measure, be a defense for its use.

Dr. G. Frank Lydston, of Chicago, read a paper entitled "Irrigation of the Deep Urethra and Bladder Without Catheter or Tube."

From personal observation he had been led to believe that there was the greatest possible variation in resisting power of the deep urethral muscles and vesical sphincter. He had noticed that in some patients it was quite easy to force fluids into the deep urethra and bladder, while in others as much force as was compatible with the integrity of the urethral walls might be employed without forcing injected fluids into these parts. Patients had themselves informed him that it was only with great care that they were able to inject the the urethra without forcing the medicament into the bladder, while others never made such complaint. He was at first inclined to attribute this difference to roughness of manipulation, but experiments had since proven to his satisfaction, that experience of these patients involved a point of great practical interest and importance. He had for many months been using irrigation with a short urethra nozzel in the treatment of urethritis, and had therefore been able to gain some valuable experience in this direction. He found that in many patients there was little difficulty, the irrigator being about the level of the patient's head, on an average, in irrigating the prostatic urethra and bladder without either tube or catheter. This is accomplished with no discomfort to the patient as a rule. He had utilized this practical point in the treatment of posterior urethritis to great advantage. One of the advantages of this method of irrigation in prostatic troubles was the facility with which hot water might be applied directly to the prostatic sinus. By carefully adjusting pressure by means of the fingers, about the nozzel while the latter is *in situ* at the meatus, the entire urethra may be kept fully distended by the solution, while the excess of water is allowed to escape around the nozzel. In the treatment of urethritis this method of irrigation was far superior to that usually adopted. A very promising feature of the method, was the fact that the patient could easily irrigate his own bladder in quite a proportion of cases, something that he could not readily do *via* the catheter. The method is designed to meet the indications existing in a large class of cases in which irrigation of the bladder and prostatic sinus is demanded, yet catheterism was to be avoided if possible. Whenever we could accomplish the purpose of vesical or urethral irrigation without instrumentation, it was our duty to do so.

The following officers were elected:

President.—Dr. Dudley S. Reynolds, Louisville, Ky.

Vice-President.—Dr. C. W. Murphy, Salem, Ind.

Secretary and Treasurer.—Dr. Geo. W. Burton, Mitchell, Ind.

Place of next meeting,—Spencer, Ind. Time, December 29, 30, and 31, 1892.

The Society, after tendering its thanks to the management of the West Baden Springs Hotel, on motion, adjourned.

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Leading Articles.

VAGINAL EXTIRPATION OF THE UTERUS.

Free discussion and the publication of all results, whether good or bad, are the only means by which the profession can assure itself of the utility of any surgical or therapeutic procedure. The opinions entertained regarding the value of the operation of vaginal extirpation of the uterus and adnexa, by gynæcologists in this country, are well known to the majority of our readers. Recently, however, the subject has been actively discussed abroad, cases cited, and theories advanced. The results of these are interesting, embodying as they do opinions based upon the experience of some of the most eminent gynæcologists in Europe.

Segond, who was originally the most vehement opponent of Péan's suggested "uterine castration," but who was converted to the operation by a case of his own successfully operated upon by Péan, not long since reported to the Surgical Society of Paris the results of 23 operations performed by himself. The operation was always made in cases of suppurative processes of the tubes and ovaries.

There were four deaths—all resulting directly from the operation. Péan on the other hand, has reported 66 cases without a single death. The remaining 19 cases of Segond's completely recovered. Segond regards any disease of the tubes and ovaries which would require laparotomy as an indication for the vaginal extirpation of these parts. The chief advantages claimed by the upholders of the operation are, the absence of an abdominal scar and the impossibility of an abdominal hernia as a result of the operation.

Bouilly, another French writer, while never having performed Péan's operation, nevertheless expresses himself as being strongly opposed to it except in such cases where firm adhesions to the neighboring

parts and the presence of old fistulæ render the result of a laparotomy doubtful. He claims that in the vast majority of cases of disease of the ovaries and tubes laparotomy and not Péan's operation is indicated. Bouilly considers Segond's claims for the merits of the operation unfounded; that the number of cases as yet reported is not large enough to permit of any definite conclusion being reached; and that Segond's rate of mortality is certainly against rather than for the procedure.

Richelot also suggests that Segond's enthusiasm has carried him too far. While Richelot does not deny the superiority of Péan's operation in certain peculiarly adapted cases, yet he believes that the operation should never be attempted as a substitute for laparotomy unless specially indicated.

Bazy recognizes only two indications for the operation: First, a suppurative condition of both adnexa coupled with a poor general condition of the subject; Second, old lesions of the adnexa which deprive the latter of their functions. Even the last indication is, according to Bazy, open to objection, since the possibility of a restoration of the normal functions of the ovaries and tubes can only be determined by a laparotomy.

Terrillon, whose numerous writings on gynæcological subjects are well known to our readers, states that in his opinion Péan's operation has decided advantages over laparotomy in cases of suppuration of the ovaries and tubes complicated with intestinal adhesions. He has performed four such operations, all of which resulted favorably; in conclusion, he states that the operation is, however, rarely indicated, and should not be undertaken in the general run of cases as a substitute for laparotomy.

Pozzi, the Italian gynæcologist whose experience with laparotomy has been so extensive, is decidedly against the operation. He bases the reasons for this opposition on the following grounds: First, because the operation does not give better results than laparotomy, and because in laparotomy the diseased organ can be directly removed, while in Péan's operation it must frequently be left behind. Second, because the latter is equally severe an operation as laparotomy, and while in the former a possible mistake in the diagnosis cannot be controlled, it can be in laparotomy. Third, because the cosmetic advantages should not be taken into consideration at all.

Routier, in an article on the subject, while not speaking from personal experience, states that the good results he has had from laparotomies do not permit him to abandon it for any other method as yet offered.

Lucas Championiere, on the contrary, is convinced that in all cases where the suppuration if not confined to the ovaries and tubes, but has invaded the neighboring tissues, Péan's operation is undoubtedly indicated, and promises the best results. This opinion is, however, based upon theory only, since he has not met with a case in which he could apply the operation, and he acknowledges that the excellent results obtained by laparotomy would not justify its abandonment. He also calls attention to the difficulty experienced in diagnosing suitable cases.

Terrier claims that the operation should only be attempted when the case is one of pyosalpinx complicated with suppuration of the pelvis, and Reynier confirms this opinion.

We may also quote the results obtained by Segond in operations of total hysterectomy for cancer of the uterus, which he has recently published in the *Semaine Médicale*. In all he has operated upon thirty-three cases, twenty-five consisting of cancer of the cervix and eight of cancer of the body of the womb. His results were twenty-six recoveries and seven deaths. The causes of death were septicæmia, peritonitis, strangulation of the intestine,

hæmorrhage, and shock each one case; and two cases from subsequent peritonitis. Of those which recovered from the operation three had a return of the disease in three months; eight are alive but have not been examined; three seem completely cured, the operation having been performed in 1888 and there having been no sign of a return of the disease. The others have been lost sight of.

In conclusion, it may be justly claimed in view of the opinions of those foremost among European gynæcologists that in Péan's operation of vaginal extirpation of the uterus, ovaries and tubes, we have a surgical procedure which should only be undertaken under certain specified and rare circumstances, and that the asserted superiority Péan's operation over laparotomy cannot be supported by the meagre experience yet obtained.

THE OPERATIVE TREATMENT OF RETRO-DISPLACEMENT OF THE UTERUS.

Chaput (*Semaine Mèdicale,* 1892, No. 17), at the conclusion of a paper on this subject, summarizes as follows: 1. Simple retroflexion requires no treatment. 2. Retroflexion complicated with metritis and prolapsus is best treated by curetting and repair of the pelvic floor. 3. Alexander's operation is often difficult, and sometimes fails to keep the uterus in its normal position, or if the organ is anteverted the symptoms are not relieved. 4. Ventrofixation is preferable to the latter operation, since the surgeon is not only sure that he has replaced the uterus, but he not able to remove the adnexa, which are so frequently diseased.

Saenger (*Centralblatt für Gynäkologie*, 1892, No. 1) continues his controversy with Schücking relative to the operation devised by the latter, which he opposes on the ground that fixation of the anteflexed uterus is not the result to be aimed at in ventro-fixation, but rather shortening of the sacro-uterine ligaments with free mobility of the organ, as when it is supported by a pessary.—*Amer. Jour. Med. Sci.*

Book Reviews.

THE DIAGNOSIS OF DISEASES OF THE NERVOUS SYSTEM. A Manual for Students and Practitioners. By Christian Herter, M. D. Physician to the Class of Nervous Diseases, Presbyterian Hospital Dispensary, New York. New York and London: G. P. Putnam's Sons, 1892.

This book possesses originality in its arrangement which commends it, and the facts concerned in the diagnosis of nervous diseases are related in a fresh manner. It is given to the profession with the understanding that it is an elementary treatise, yet the text is full enough to make it serviceable to all physicians. The chief good points about the work are its system and practical bearings. Instead of a complete elucidation of the anatomy and physiology of the nervous system, only the important facts concerned in a thorough understanding of the sensory and motor pathways have been detailed, and credit must be accorded the author for the excellent way in which this has been done, and for the very comprehensive diagrams with which the text is interspersed in this portion of the book.

The second chapter, upon the symptomatology of nervous diseases, gives a description of symptoms with reference to their diagnostic and pathological significance. In this way the student learns the true value of symptoms, and this is more by their association in groups than by their individual worth.

In the third chapter, which is upon the localization of lesions, the author has given the important symptom-groups in connection with each lesion. Thus it will readily be seen that symptomatology has received special attention, being discussed from the standpoints of general symptomatology and in a special way as related to the pathology of nervous affections.

The fourth chapter is devoted to the nature of the lesion, and all the ætiological, symptomalogical and pathological facts have been gathered together in order to throw as much light as our present knowledge of the subject will permit. The facts which are learned from the diagnosis of the position of the lesion are also brought together, and play by no means an unimportant part in certain diagnoses.

Following this is a chapter upon clinical types of nervous diseases. The types are

clearly represented, and the claim of the author that "variations in type" and "transitional forms" have been duly recognized, must be allowed.

The next chapter is probably the most interesting of the book, and deals with the diagnosis between organic and functional disease. The book ends with a short chapter upon the examination of patients.

Taken as a whole, we think that the book will be chiefly of interest to those who desire to be specially familiar with nervous affections. It is a good student's book, and will be found very useful to the general practitioner.

VARICOCELE AND ITS TREATMENT. By G. Frank Lydston, M. D. Chicago: W. T. Keener, 1892.

In this monograph the author has given us a review of the subject of varicocele and its treatment in a concise yet comprehensive manner. The contents comprise eight chapters and eighteen illustrations. The text is written in a most agreeable style, which characterizes the author's articles.

The treatment of the milder forms of varicocele is, according to Dr. Lydston, altogether palliative. He states that in a large proportion of cases all that is necessary to do is to allay the patient's mental annoyance by a little sound physiological advice. Instruction in sound physiology and hygiene is necessary in all cases in order to keep the patient out of the hands of the quack on the one side and to assist in a cure on the other. Marriage is recommended as the best remedy in cases which the author terms "spermatic congestion." Regulation of the diet and active exercise is strongly recommended, as are cold flagellations and the use of a suspensory bandage as adjuncts to palliative treatment. The cure of this condition by coagulative electrolysis and caustics also receives thorough attention. Finally, the various operations which have been devised of late years are fully detailed. The book is a valuable addition to genito-urinary surgery.

DEBILITY FROM LA GRIPPE.

℞ Pepsin in scales.....ʒ ij.
Acid phosphoric dil.....ʒ iv.
Syr. hypophos. comp.....q. s. ʒ iv.
M. Sig.—Teaspoonful three times a day for an adult.

—*The Prescription.*

Periscope.

THERAPEUTICS.

ACTION OF TUBERCULIN IN RABBITS.

Prof. Doenitz, of Berlin, published in November (*Amer. Jour. of Ophthalmology*) the results of experiments in regard to the action of tuberculin upon the experimental eye tuberculosis of the rabbit. The conclusions are:

1. The tuberculin is a sure curative agent for the experimental tuberculosis of the eye of the rabbit.
2. The tuberculin shows its curative effect only after the tubercle can be demonstrated.
3. The first effect of the tuberculin is a transient, but severe irritation of the eye.
4. Under the continuous action of the tuberculin, all irritation of the eye subsides.
5. When, before beginning the treatment, deep-reaching destructive processes have not occurred, the cure results in retention of the visual functions of the eye, otherwise atrophy results.

TREATMENT OF PLEURITIC EFFUSIONS.

Köster (*Therap. Monatsh.*, March, 1892) says that the use of the salicylates in the treatment of serous pleuritic effusions has not become so general as it deserves to be. He has thus treated 32 cases, 27 of which were examples of the primary disease, while 5 were secondary to tubercle, as shown by the physical signs or character of the fluid. In 17 out of the 27 cases the results were very favorable. These cases not only included small as well as recent effusions, but also large ones and those in which the patient had suffered from symptoms for weeks. The results, however, were most favorable in recent cases. In most patients there was moderate fever, which declined rapidly. Absorption began almost as soon as the treatment, and in from five to seven days even large effusions had disappeared. Once or twice the abnormal physical signs did not clear up for some time. The amount of urine was quickly increased. The symptoms of which the patient complained soon disappeared. In 10 out of the 27 cases the results did not differ from those obtained by other methods of treatment, and

3 of these had to be tapped. The probability of the tuberculous nature of these cases must be borne in mind, but here there was no evidence in favor of it. Among the cases of apparently secondary pleurisy, the results were occasionally also decidedly good.—*Brit. Med. Jour.*

MEDICINE.

PARACENTESIS PERICARDII IN GRAVES' DISEASE.

Shattuck (*Boston Med. and Surg. Jour.*, November 5th, 1891) records this case. The patient, a young woman, aged 24, suffered from rheumatic symptoms and pericarditis. The pericardial effusion rapidly increased, so that on the eighth day the area of cardiac dullness extended from well outside the left nipple nearly to the right nipple and up to the second rib. Aspiration was decided upon, so a trocar was introduced into the fifth left interspace three inches from the median line; about one ounce of bloody serous fluid was removed. As no more could be obtained from this situation, though the cannula was freely movable, another puncture was made in the fourth right space two and a-half inches from the middle line, but no fluid was obtained. An ice bag was applied to the heart, and next day pericardial friction was heard. Two days later, as she was worse, another puncture was made on the left side, but only half an ounce of blood-stained serum was withdrawn, and two days later another puncture on this side, but further out, failed to remove any fluid. After this the patient did well, and eventually recovered. During convalescence it was discovered that she was the subject of Graves' disease, but without exophthalmos, and it was surmised that this disease had been existent all along.—*Brit. Med. Jour.*

HIGH TEMPERATURE IN INTERMITTENT FEVER.

Dr. Stephen Mackenzie, in the *British Medical Journal* for February 13th, reports a case of intermittent fever in which twice the temperature was 107° F., twice 113°, and once 113-8°. The observations were made with the thermometer in one or the other axilla; sometimes two thermometers were placed in the axilla at one time and found to correspond. On account of rigors the temperature could not be taken in the mouth. The periods of hyperpyrexia were exceedingly brief, sometimes a return to normal temperature occurring in five minutes. The patient recovered.

SURGERY.

OPERATIVE TREATMENT OF GLAUCOMA.

Collins (*R. L. Oph. Hosp. Reports*, Dec., 1891,) gives some interesting conclusions based upon the pathological examination of twenty-three eyeballs which had been operated upon for glaucoma, chiefly by iridectomy. Assuming that the tension in primary glaucoma, however it may arise, is kept up by the apposition of the root of the iris to the posterior surface of the cornea and a consequent blocking of the filtration angle, Collins infers that an iridectomy may remedy the condition in either of three ways:

1. When the apposition is recent, very slight means may suffice for the escape of the aqueous, a drag on the iris being often enough to loosen the attachment.

2. In recent or acute cases the iris may tear away from its extreme root, thus leaving a portion of the filtration area free for drainage, even should the remainder of the iris keep its faulty position.

3. In other cases a permanent gap is maintained in the walls of the globe by the prolapse of a fold of iris into the wound. Subsequent stretching or atrophy of the iris tissue occurs, or periodic rupture of the same, thus allowing the aqueous to pass through into the subjunctival tissue and thus become absorbed.

A sclerotomy may produce a permanent reduction of tension in either the first or last of these ways, or it may open up a fresh means of access to the filtration area, so that excess of fluid could find a direct channel of exit from the posterior channel. It is unlikely that the fibrous tissue of a cicatrix should more easily allow filtration through it than the ordinary tissue of sclera or cornea. Iridectomy or sclerotomy will fail to relieve tension when none of the above results are attained. An iridectomy may also fail in consequence of displacement forward of the lens, so that its upper part blocks the freshly-opened filtration area, adhesions resulting between

it and the sclero-corneal cicatrix. The practical lesson is the advisability of an early iridectomy before the apposition of the root of the iris has resulted in adhesion, or a preventive iridectomy might be done, as in the majority of cases primary glaucoma affects both eyes. Iridectomy is most likely to succeed where there is least adhesion of iris root and cornea.

OBSTETRICS.

PREGNANCY AND VENTRO-FIXATION.

Fraipont (*Annal. de la Soc. Méd.-chir. de Liège*, 1892, No 4) reports seven cases of ventro-fixation by Winiwarter and himself, three of the patients who were married, becoming pregnant soon after operation, although one of these had a small ovarian cyst and two a cystic ovary. In each instance the diseased ovary was removed and the fundus uteri was attached by deep sutures including the edges of the abdominal wound. One woman was delivered at term, another at seven and one-half months, in consequence of an accident, the child living; the third bore a living child at the eighth month. All the patients complained of severe pains in the cicatrix between the third and fourth months of pregnancy, which were absent in the latter half. Labor was normal in each instance. In one case only the uterus was found to be retroverted after delivery. It is doubtless desirable that pregnancy should not occur so soon after the operation, since the adhesion is at first quite firm, but later becomes more cord-like and distensible, allowing the uterus to rise out of the pelvis, while preserving its normal position.—*Amer. Jour. Med. Sci.*

AN UNUSUAL CASE OF TWINS.

O'Reilly (*Archives of Gynæcology, Obstetrics and Pediatrics*, April, 1892), describes an interesting case of dual pregnancy. The patient, a IV-para, in labor at term, had not felt the movements of her child for ten days. She was delivered of an eight months' macerated fœtus. On attempting delivery by expression O'Reilly noticed that the uterus was larger than usual after delivery and of irregular contour. By vaginal examination nothing abnormal could be detected. Ergot was administered, the pains soon became stronger, another child presented and was delivered living. The mother made a good recovery. There was but one placenta. The cords were attached within a short distance of each other. The placenta for two-thirds of its extent was of a livid red color and firm consistence. To this was attached the cord of the dead child. The other third was separated by a distinct line of demarkation and healthy. The children were not weighed immediately after birth. The living child weighed three pounds one ounce twenty-one days after delivery. The dead child's estimated weight was between four and five pounds. —*Univ. Med. Mag.*

GYNECOLOGY.

THE INFLUENCE OF PELVIC DISEASES ON THE VOICE.

Klein (*Journ. Am. Med. Assoc.*, 1892, No. 16) says that during menstruation women are prone to inflammation of the tonsils and larynx, and that he has observed in singers at this time that the voice often becomes hoarse and deep, assuming a masculine tone, so that one who is accustomed to noting the difference can tell when they are menstruating.

In many cases of ovarian disease he has observed hypertrophy of the tonsils and uvula; as in eunuchs, there appears to be an intimate relation between the voice and the sexual organs.—*Amer. Journ. Med. Sci.*

EXPLORATORY INCISIONS THROUGH VAGINA.

Segond (*Ann. de Gynèc.*, March, 1892) attended a woman, aged 35, whom he believed to be suffering from retroversion, with fibroma of the fundus. Reduction was easy. He made an exploratory incision through the vagina, and found that the tumor was not a fibroma, but an extra-uterine fœtal sac in the right tube. As the opposite tube was diseased Segond removed it, together with the sac and the uterus. A vaginal incision is not, in his opinion, inconvenient should diagnosis prove incorrect. On one occasion he diagnosed a uterine fibroid, made a vaginal incision, and found that the growth was an ovarian cyst; the tumor was removed with ease. In a second case he suspected pelvic abscess; he opened not a pus sac but a

hæmatocele. This was washed and drained, and the patient recovered with perfect internal organs. In a third pelvic fibroma was diagnosed. On vaginal incision he found a mass of proliferous ovarian tumors, and removed them, together with the uterus through the vagina. The tumor had been treated by electricity for eighteen months. When a large swelling projects downwards, pushing the vagina in front of it, the operation should be done through the vagina.—*Brit. Med. Jour.*

PEDIATRICS.

GONORRHŒAL RHEUMATISM IN THE INFANT.

Dr. Beclère has just called attention, in the *Revue dè Gènéral de Clinique et de Thérapeutique*, to a complication of gonorrhœa little known about till now, gonorrhœal rheumatism in youthful age. In less than a year he has observed two cases, one in a little girl of five and a-half years, the other in a still younger subject, a baby of twenty months. In the first of these little patients the origin of the contagion could be definitely established; the child had been the victim of an apprentice of sixteen or seventeen years of age, who had a gonorrhœa of some standing. The child was treated by immobilization and compression with cotton, and was cured in fifteen days of its arthritis, but it preserved for some time a certain amount of muscular atrophy of the whole left upper extremity (arthritis located in the left wrist), which gave way to continuous currents; the vulvo-vaginitis disappeared after lotions and injections of bichloride. Thus, in the first case, nothing is plainer; the child was contaminated by a subject of the disease, had a blenorrhagia of which the origin was known, followed by a rheumatism of the wrist. It was not the same in the author's second case; here there was a twenty months' old infant presenting the right tibio-tarsal articulation in a swollen, rosy, painful condition, together with a thick, purulent vaginal discharge and a drop of pus exuding from the meatus-urinarius. It was impossible to get precise data concerning the origin of this running, but the aunt of the infant acknowledged that the little girl slept with her mother, who had for several months suffered from a greenish vaginal discharge. The mother could not be examined. The author thinks that in this case we have to deal with a gonorrhœa-insontium accidentally transmitted by the mother to the daughter. These cases, we repeat, should call the attention of practitioners to the fact that, when they observe in infants of a tender age articular manifestations having the clinical aspect of gonorrhœal rheumatism, age does not constitute a sufficient argument to make us reject the diagnosis. On the contrary, such a case should make us think of this possibility, and cause us to make a thorough examination of the genital organs.

HYGIENE.

DOES INFLUENZA PROTECT FROM A SUBSEQUENT ATTACK?

The question whether an attack of influenza confers protection from subsequent infection is one which must have often arisen during the experiences of the last three years, but the data for its solution are not yet fully available. The amount of information which must have been gleaned by the family practitioner in all parts of the country upon this and many other points concerning the malady would, if collated, go far to settle the matter. It is of course notorious that certain individuals have suffered from more than one attack; but the conviction is pretty general that such cases really form but a small minority of the large numbers who have suffered. Then, again, it must be deemed possibly that the degree and duration of the protection may depend on the severity which the primary attack exhibited, for one can hardly invoke the doctrine of attenuation of virus in the case of this disease, which shows so much variation from the ordinary course of infective disorders in general. In a highly interesting contribution upon the features of the present epidemic in Berlin, Dr. Ruhemann directs especial attention to this question of protection and affords valuable evidence of it. He aptly remarks that the more gradual evolution and persistent character of the present epidemic, as compared with the rapid and stormy course of the pandemic of 1889 to 1890, have afforded opportunity for more closely studying the character of the malady, and that it has especially enabled us to recognize more clearly its con-

tagious nature. According to him influenza has prevailed in Berlin ever since the beginning of last September, and he notes how on this occasion the stress of the outbreak had fallen to a far greater extent upon women and children and less upon men than was the case two years ago. His own practice affords proof of this, especially in the fact of the greater frequency of uncomplicated cases among women than among men. As to the question of protection, he has observed that members of families who were severely attacked two years ago have either escaped entirely at present or been only slightly affected; whilst, conversely, the most serious cases of the present time have arisen in households which the influenza spared during its earlier visitation. He notes the statement of Dr. Edw. Gray, to the effect that "many persons who escaped the epidemic of 1775 were affected by that of 1782, and many who escaped the latter were affected by the former," as showing that a century ago this question of immunity had not passed unnoticed. Dr. Ruhemann gives his experience of 55 families, numbering 193 individuals. In 1889–90 there were 64 cases of influenza among this group, whilst in the present outbreak only 40 have been attacked, and, what is of special interest, only 5 out of this number were affected (and that but slightly) two years ago, whilst of the 64 then attacked, only 4 have again become victims. Should this prove to be anything like the general experience it would go far to substantiate a fact that has hitherto been much disputed, even to the extent of declaring that one attack predisposes to another. That one individual may have several recurrences during the prevalence of a single epidemic does not, in Dr. Ruhemann's opinion, mitigate against the general doctrine of protection, since he thinks many such recurrences may be explained by lack of caution on the part of the patients against exposing themselves to fresh infection before they are restored to full health. That influenza does not protect from a second infection should reassure many persons who, having once suffered severely from it, dread a repetition of so depressing a malady, and it may be further comfort to them to learn that the more they have to suffer at first, the less likely are they to suffer at all again. If, then, influenza shares this common property of all infective diseases, it is not so remarkable that it should not apparently select the young in preference to the adult and aged, seeing that the whole community is more or less "unprotected" when it first reappears after an absence (in pandemic form) of years.—*Lancet.*

MEDICAL CHEMISTRY.

CREASOTE AND ITS ELEMENTS.

Dr. E. Main has made a laboratory study of this remedy, which has of late attracted so much attention. He established the fact that the elements of creasote were poisonous in the following order; 1, para-cresylol (least); 2, phlorol; 3, guaiacol; 4, creasote;5, creasol (most). Locally, creasol was the most irritant, guaiacol the least. For all these elements this laboratory work shows three important characteristics: 1, that they are feebly poisonous; 2, a tolerance can be established; 3, they are eliminated by the lungs. As remedies against tuberculous they can be arranged in the following order: 1 and 2, phlorol and creasol; 3, para-cresylol 4, guaiacol; 5, creasote (most powerful). It is believed that although all the elements of creasote have some value, and indeed guaiacol should be especially mentioned, yet creasote is the most active. Beechwood creasote should be preferred for its antiseptic power, for its feeble toxicity, and because of the results furnished by experimental therapeutics as well as by clinical observation.—*Bulletin Générale de Thérapeutique*, 1892, liv. 10e, p. 205.

ON THE TOXIC AND BACTERICIDE ACTION OF THE SERUM OF THE BLOOD OF THE INSANE.

D'Abundo found that the blood serum of a paranoiac (tranquil) more nearly approached that of a sane individual in its toxic power than any other. During an intercurrent period of depression the toxic action was diminished, while during an excited period it was increased. In quiet melancholia the toxic power was diminished, but prolonged agitation increased it. In quiet dementia it was found constantly lessened. In progressive paresis it increased excepting in two cases, in one of which the patient was in a condition of quiet, and in the other there was a pre-

dominance of motor symptoms. In simple mania and in maniacal exaltation the toxicity is increased. After post-epileptic attacks, and especially in conditions of stupor, it was found diminished. In pellagrous dements it was found notably diminished. In imbecility it was diminished, and in idiocy the results were discrepant. As regards the bactericide action it was found generally increased in insanity and especially in paresis and in mania. It was diminished in post-epileptic conditions and in depressive forms.—*Archivio Italiano per le Malatie Nervose,* Sept., 1891.

NEWS AND MISCELLANY.

A NEW CREMATORY FOR BERLIN.

Berlin is shortly to have a crematory, erected at the city's cost, in the Friedrichsfeld Cemetery, where bodies of the poor and unknown and of the subjects of anatomical investigation at clinics and hospitals will be reduced to ashes. The bodies from the anatomists' tables alone number about 1,000 annually. To further this practice the Berlin Society for Cremation has petitioned the Parliamentary Commission on the Civil Code that the choice between burial and burning be granted hereafter to every German citizen.

INFLUENZA AND DRUGS.

It is stated that quinine, which in 1878 was selling at 16s. per ounce, is now selling at 10½d. The price of eucalyptus oil has suddenly doubled owing to the popular demand for it as an agreeable diffusible aromatic, vaguely supposed to have antiseptic properties when diffused in the air. To be of any use whatever—except as a mental consolation and encouragement—it would need to be used in quantities which would make the air irrespirable. Innumerable "specifics" continue to be irrationally puffed—salicin, salicylate of soda, bicarbonate of potass, antipyrine, salipyrin, and of course also hydropathy and quack remedies innumerable. It is surprising that educated men should be willing thus to enter the lists of public notoriety by recommending specific drugs for a disease which is not known to admit of any, and that they should endeavor to press upon an uninstructed public incapable of forming a correct judgment a universal use of drugs and therapeutic methods which can only be correctly used or estimated by qualified medical attendants, capable of judging the particular needs and the clinical condition of each patient. There is some loss of professional self-respect involved in such proceedings, and no good can accrue to the general public, who can but be bewildered, and are very likely to be dangerously misled by such a course.—*Brit. Med. Jour.*

AGAINST PROPRIETARY MEDICINES.

At the meeting of the Missouri State Medical Association, Dr. L. Bremer, of St. Louis, Mo., introduced the following resolutions which were unanimously adopted:

Whereas, The evil of prescribing and recommending proprietary medicines is constantly increasing, much to the detriment of the profession and the public, especially the latter, many of whom are led into the drug-habit; therefore,

Be it resolved, by the members of the Missouri State Medical Association, that we condemn the practice on the part of some physicians of giving certificates as to the efficacy or special uses and advantages of proprietary medicines, or what is usually understood by this term.

Resolved, That as a body we recommend to the profession the future discontinuance of such medicines, if now used by them.

HOT SPRINGS, THE DOCTORS, AND THE TOUTERS.

The following circular was adopted by the Hot Springs City Council, March 1892: "Don't listen to any one who volunteers advice about doctors. No regular physician will require more than $5 in advance. If you have letters to a physician, deliver them in person. If drummers find you have such letters, they will tell you the doctor is out of the city, dead, quit practising, drunk, or something of the kind. Drummers on the trains, on the streets, or at the hotels or boarding-houses will pretend that they are visitors."—*Weekly Medical Review.*

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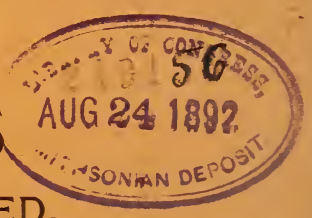

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THE
MEDICAL AND SURGICAL REPORTER.

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Clinical Lectures.

MELANOTIC SARCOMA; VESICAL CALCULUS; COLD ABSCESS OF HAND; FRACTURE OF FEMUR AND RUPTURE OF QUADRICEPS TENDON.

By PROF. ROSWELL PARK, M. D.,
BUFFALO GENERAL HOSPITAL, SURGICAL CLINIC.

Gentlemen:—This patient, a man of seventy, has had for seven or eight months a spot over his right nipple looking as if he had been tatooed. Underneath these little black points which you can readily see, I feel a hard mass to which the skin is attached but which still moves over the pectoral fascia. He has been on the medical side of the house and I have seen him only once before. From this history of the case, I have come to the conclusion that this is a neoplasm, and about the only tumor which can give such a black color is a melanotic one which is practically always sarcoma. It is probable, therefore, that we have to deal with a melanotic sarcoma of the skin and subcutaneous tissues. His liver is enlarged and in such a case we would expect metastasis of the liver. Were it not for this patient's age and the evil—I might say infernal—tendency which these growths manifest to recur after apparently the most perfect removal, I should advise operation. Under the circumstances, however, especially as the progress of the growth is slow, I should not advise surgical interference.

VESICAL CALCULUS.

The next patient is an old man with chronic cystitis and a very large prostate body. He suffers, as these patients usually do, with frequent urination, a certain amount of pain referred to the end of the penis and many of the rational signs of stone in the bladder. Thrice, however, a number of weeks ago, I sounded him as carefully as I could, after having injected into the bladder from a fountain syringe all the water that he could bear without an anæsthetic and I did not touch anything gritty or calcareous. Quite recently, however, the orderly who has been washing out his bladder daily informed me that on inserting a soft catheter he noticed something gritty. I also felt the same gritty obstruction to the movement of the soft catheter but I could not get the sensation with the hard catheter. I have had the patient anæsthetized in order to examine him carefully, and, if I find a stone, I shall probably make a perineal section and perform lithotomy. I should have done this sooner had it not been for the patient's age and feeble condition. Ninety-five per cent. of the cases of stone in the bladder are easily diagnosed by passing a proper sound or stone searcher into the bladder and rubbing or striking it against the stone. Occasionally, however, we meet with cases in which the detection of the stone is difficult and in which the best men fail to discover it except after the operation undertaken on account of the symptoms. Now, with the patient etherized, the minute I pass the metallic catheter I touch the stone with perfect ease. It is hard to say why I did not find it at the three previous examinations with a metallic instrument. The patient is too large and stout a man for the performance of the suprapubic operation and I do not like the method of drainage by the suprapubic operation as well as by the perineal section. After completely filling the bladder with a boric acid solution, I introduce the most approved form of stone-searcher which consists of a steel sound with a short beak in

order to verify my diagnosis. I now pass the grooved staff into the bladder and make a median section through the perineum till I reach it. On account of the fat of the patient, the distance from the perineum to the bladder is so great that only the tips of the fingers can be inserted into the bladder and I must use the forceps to grasp the stone. The stone seems partially adherent and I am hindered not only by this fact and by the unusual depth of the bladder from the surface but by the resistance offered by the enlarged lobes of the prostate. The stone slips away from the grasp of the forceps behind the prostate. In order to overcome the mechanical difficulties in removing the stone, we will extend the legs fully in order to let the stone drop back into the fundus of the bladder and to relax the perineum. I have at last succeeded in removing the stone in fragments and you are no doubt surprised that anyone, even a novice could have failed to touch it with a sound.

[Clinic four days later.]

The fragments of stone after being dried and weighed amounted to twenty-one grains. The patient left the table in good condition, the bladder drainage was free and everything was favorable till afternoon when he appeared somewhat dusky in the face, his mind was not quite clear and in the night he developed the signs and symptoms of pneumonia. The next day there was very evident pneumonia with consolidation of the lower part of the right lung. The patient ran down steadily and died three days after the operation, the bladder symptoms at no time having been alarming or sufficient to cause any apprehension. Pneumonia is not an infrequent accident of surgical practice, especially in old people and you remember I have already told you how many old persons who sustain fracture of the neck of the femur die of pneumonia. There is an essential differences between acute crupous pneumonia and this form which occurs in the aged. The cause of the latter is a failure to maintain the equilibrium of the circulation, a sort of congestion of the lungs results and this develops into a broncho-pneumonia. This patient probably had surgical kidney which is a very definite name for a rather indefinite lesion consisting of minute abscesses in the kidney, a pyelitis and distention of the pelvis of the kidney. His urine did not reveal this condition because there was so much pus from the bladder that even a microscopic examination was not sufficient. I want this case to serve as a lesson that in elderly people or, in fact, in any patient with diseased kidneys and with a consequently imperfect urinary excretion, there is a greater liability to bronchitis or broncho-pneumonia or even cardiac troubles, both pericarditis and endocarditis, than in other patients. Every now and then it happens that a patient is lost from some complication of this kind. Some time ago, I lost a patient on whom I did a laparotomy for gun-shot wound of the abdomen, the cause of death being inflammation of the pericardium.

COLD ABSCESS OF THE HAND.

This young woman came to me several months ago with a skin disease about the hands and wrists which resembled lupus and which was regarded by Dr. Wende, myself and several others as tuberculosis of the skin. She was treated with inoculations of tuberculin and with various external applications. Some time afterward she developed a fluctuating swelling in the ball of the thumb which I diagnosed as cold abscess and opened, letting out a quantity of caseous, puruloid matter. There persists a sinus which discharges and I shall to-day open it freely and curette its walls. You will notice that I do no more cutting in the palm of the hand than can be helped as I wish to avoid cicatrical contraction.

There is also on the back of the wrist a fluctuating swelling which is probably a distention either of the bursa or of the tendon sheaths. On making an exploratory incision, the accumulation seems to be entirely of serum and not sufficient to warrant further interference.

I have scraped out the sinus in the palm and have packed it with iodoform gauze. We shall in all probability have closure of its walls with granulation tissue or, as it was formerly called, by second intention. The exploratory incision on the back of the wrist I will close with catgut.

RUPTURE OF QUADRICEPS TENDON.

Some two months ago, this patient was injured in a peculiar way by a run-a-way. The tendon of the quadriceps extensor was torn off from the patella and there was a fracture of the external condyle of

the femur—in fact I think that more than the external condyle was broken off. I did not see the patient until a few days ago. At that time when the dressings were removed I found no attempt at union of the bone and the quadriceps tendon was drawn up and contracted. If it were simply non-union of bone, this would be a very fair case in which to test Brainerd's operation of drilling the bone in several directions in order to excite the formation of inflammatory callus. But there is also to be considered the condition of the muscle which, if not corrected, will surely weaken the limb. I purpose therefore, opening the knee joint and trying to sew the tendon to the patella as well as fastening the fragment of bone to its proper place. On moving the leg you will see that there is free movement above the knee, indicating that there has been fracture of the femur just above the condyle.

A transverse incision was made over the patella in order to expose the fracture. The bone ends were not sharp but were covered with connective tissue. In order to make them unite, this material was cut away and the fractured surfaces freshened with scalpel and bone forceps. The quadriceps tendon was sewed to the fibrous investment of the patella.

A CONTRIBUTION TO THE HISTOLOGY OF METASTATIC PHLEGMON.

Bunday (*Centralblatt für Chirurgie*, April 16, 1892), says, the explanation of the cause of extensive cell tissue phlegmon, inflammation of the serous membranes and the joints by pyæmia, is very difficult, and especially so when the metastatic formations by septic emboli or by cocci emboli cannot be recognized in the capillaries. The author presents the following conclusions from his studies:

"It is not at all necessary that the mechanism of the embolus, or particles of tissue, or masses of cocci should make a metastatic abscess, but the endothelial cells of the blood-vessels are inoculated by the microörganisms circulating through the blood, grow with great rapidity, break through the wall of the vessel and go to production of phlebitis and thrombosis, and still later, phlegmona. This condition is generally diffuse in contrast to the circumscribed embolic abscess, and is due to the histological arrangement of the tissue."—*Univ. Med. Mag.*

SURGERY OF THE GALL-PASSAGES AND LIVER.

By DR. W. KÖRTE,
BERLIN, GERMANY.

(*Continued from the last issue of the* REPORTER.)

The following are the histories of the other patients operated upon by me.

Empyæma of the gall-bladder; adhesion of the same to the abdominal walls; obliteration of the cystic duct; incision and recovery.

CASE VIII. Mrs. W., 69 years old. Twenty-five years previously the patient had suffered from "stomach cramps." For two years previous to her admission she had frequent pains in the region of the stomach and became greatly emaciated. Five weeks previously she was taken ill with severe pains in the region of the liver, accompanied by chills and fever.

The patient was admitted July 7, 1890. The abdomen was distended and the liver reached down to the level of the navel. At its lower edge was a fluctuating growth, and the skin over this was inflamed.

On July 8, 1890, an incision was made and about one quart of fœtid pus evacuated. From the abscess cavity the finger could be introduced into a large cavity attached to the abdominal walls, which stretched upwards under the liver and had apparently walls of mucous membrane. This was the gall-bladder. It was found to contain no stones. The cystic duct could not be sounded. The cavity was drained and tamponed with iodoform gauze. No gall was ever evacuated. The cavity slowly healed up, and the patient was discharged on September 11, cured.

Cholelithiasis; empyæma of the gall-bladder; carcinoma of the pancreas and liver; abscess of the liver; cholecystotomy at one sitting; evacuation of stones; death

CASE. IX. Mrs. K., 53 years old. Fifteen years previously, after a child-birth she began to suffer from symptoms of gall-stones. These troubles increased in severity after each child-birth. Seven years previously she passed gall-stones, and at the same time had icterus. She took the Karlsbad cure several times. Two months prior to admission she fell ill with severe

pains in the liver, and was unable to retain almost any nourishment. She again had icterus, and once passed some small gall-stones. She became greatly emaciated and lost in strength.

The patient was admitted August 17, 1891.

The patient was a moderately strong woman with a pendant abdomen. There was a slight icterus. The tongue was coated. The liver dullness began at the sixth rib and reached on a line with the nipple to the level of the navel. Here one could feel a rather flat, round growth, tense but not doughy, and painful to the touch. The supra-clavical glands were not enlarged.

Diagnosis: Cholelithiasis, and possible carcinoma of the liver.

On August 19, the operation of cholecystotomy was performed at one sitting. The longitudinal incision was used, and the tumor was found to be covered with adhesions, which were partly divided. The under-surface of the liver was hard and thickened. Puncture of the scarred and thickened wall of the gall-bladder revealed the presence of pus. This organ was then sewed to the abdominal wound and opened. The incision allowed the evacuation of a quantity of pus (containing staphylococci) and thirty-one gall-stones, after the removal of which clear gall was evacuated. A drainage tube and iodoform gauze was placed in the gall-bladder.

After the operation the pains diminished and the abdomen remained soft. Flatus and fæces were passed by the bowels. The patient, however, continued to grow weaker, recovered but poorly, and vomited frequently. Then the tongue became dry and the "sensorium" affected. Death occurred on September 2.

Autopsy: Peritoneum smooth and glistening; Carcinoma of the pancreas, liver and retro-peritoneal glands; gall-bladder free from stones and pus. Ductus choledochus buried in cicatrical tissue, and distended in parts. In these distended portions stones of the size of a pea were found. In the liver large abscesses were found corresponding in place to the gall-passages.

Empyæma of the gall-bladder occasioned by gall-stone; partial necrosis of the wall of the gall-bladder; cholecystotomy at one sitting; recovery.

Case X.—L. R. The patient had given birth to two children, the last time being during the first of March, 1891. During the first part of September, of 1891, she became suddenly ill while operating a sewing machine, and experienced severe pain in the regions of the stomach and liver. She was given morphine and opium, and subsequently a swelling appeared under the ribs of the right side. The patient was admitted to the hospital on September 29, 1891. She was then in fever, with a dry tongue and distended abdomen; she was also rather apathetic. After evacuation of the bowels a roundish enlargement could be felt below the arch of the ribs. It was sensitive to the touch. There was no icterus and the fæces were of normal color. The urine was normal.

There were slight evidences of septic infection, such as the dry tongue, quick pulse, and apathetic condition.

On October 2, 1891, a transverse incision was made, parallel to the arch of the ribs. The edge of the liver lay deep in the abdomen, and under it the tensely distended and fibrin covered gall-bladder. On the left side of the gall-bladder there was a discolored patch about the size of a fifty cent piece. The organ was then punctured, and found to contain a putrid fluid. It was then stitched fast to the peritoneum at the abdominal wound, and the necrosed portion covered with iodoform gauze. Incision allowed the evacuation of a large quantity of yellow pus, and three cubi-form stones varying in size from 1 to 1.5 cubic centimetres. The one stone was found wedged in the cystic duct, and after its removal the clear yellow gall made its appearance. The gall-bladder was now rinsed out with a ½ per cent. lysol solution, and a protective dressing applied.

There was a large secretion of gall through the opening in the gall-bladder, but no symptoms of peritonitis. Fever, dry tongue and rapid pulse, accompanied by loss of appetite still continued for about two weeks. The stools (passed after the administration of castor oil or calomel) were partly colored and partly gray. From October 5, there was general icterus.

The prognosis was doubtful for a long time; there remained the possibility of the presence of pus, but repeated punctures resulted negatively.

From October 12, the patient was

given luke-warm baths daily, and her condition improved from that time. The tongue became moist and the appetite picked up. The necrotic portion of the gall-bladder sloughed away.

On November 14, the gall-bladder fistula was plastically closed, and healed well. The patient reported in good health during the first part of January, 1892. From the putrid contents of the gall-bladder pure cultures of the *bacteria coli commune* (Escherich) were obtained.

Cholelithiasis; subphrenic abscess; incision, after resection of the eighth rib; empyæma of the gall-bladder; abscess of the liver; incision of the gall-bladder and liver; occlusion of the choledochus duct; cholecysto-duodenostomy; recovery.

Case XI. Mrs. G. forty-eight years old. During the youth of the patient she had suffered occasionally with "stomach cramps." She was taken ill during the latter part of December 1890, with pain and swelling in the region of the liver. These symptoms gradually increased until on January 10, 1891, they became unbearable, tearing pains. The patient was admitted January 11, 1891.

The liver dullness reached to a level with the navel, and upwards to the fifth rib.

On January 17, the liver dullness had extended upwards to the third rib, and at the back to the angle of the scapula.

On January 19, punctures were made on a line with the mamma in the fourth, fifth and sixth intercostal spaces, and a stinking pus evacuated.

The eighth rib was resected in the mammillary line; the pleura opened, and an iodoform gauze tampon carefully inserted; then the diaphragm incised and a large quantity of fœtid pus evacuated. A slight exudative pleuritis resulted, and the abscess became rapidly smaller. The pain continued at the border of the liver, and the fever remained.

On February 3, puncture of the protruding liver revealed pus. An incision was made parallel to the border of the ribs, the gall-bladder opened and a quantity of pus and twenty-six stones evacuated. An abscess in the liver, to the left and above the gall-bladder was also opened. The fever now gradually grew less. At first the discharge of gall was but slight, but on February 19, it grew to be considerable. At the same time the stools became clay colored. The free discharge of gall continued in spite of the plugging of the fistula. The use of Karlsbad salts increased the secretion.

As the patient became much emaciated, having lost twenty-eight pounds since the first of January, on May 21, 1891 the operation of cholecysto-duodenostomy was performed. A transverse incision was made at the border of the ribs, and from the middle of this a longitudinal incision reaching ten centimetres downwards. The gall-bladder was found firmly adherent to the mesentery, colon and duodenum. The choledochus duct could not be laid bare. The duodenum was then stitched fast to the gall-bladder, and both organs incised. The edges of the incision were then sewed together. The application of the suture so deep in the abdomen proved most laborious, but was successfully accomplished. The old gall-bladder fistula was then closed by suture. An iodoform gauze tampon was then inserted and the abdominal wound partly closed. In the evening the patient vomited a yellow fluid.

On March 26, the fæces became normally colored. The abdominal wound healed by granulation without complication. A stubborn bronchial catarrh delayed the recovery. Subsequently several sutures from the fistula sloughed out of the wound.

The ultimate results were complete recovery, and large increase in weight.

Cholelithiasis: occlusion of the ductus choledochus; cholæmia; cholecystotomy at two sittings; later cholecysto-enterostomy at two sittings; death.

Case XII. H., male, 54 years old. The patient had been ill since the Christmas of 1889, suffering from gall-stone colics. Icterus since the middle of May, 1890.

The patient was admitted July 14, 1890, with symptoms of severe cholæmia, intense icterus, chills, and attacks of colic. The fæces mostly acholic. The general condition of the patient was unfavorable in the extreme.

Diagnosis: Occlusion of the choledochus through stone or malignant tumor. In the region of the gall-bladder a growth could be felt at the margin of the liver.

July 29, 1890, cholecystotomy at two sittings.

The incision was made parallel to the margin of the ribs. The enlargement proved to be a cyst in the right lobe of the liver. The gall-bladder was small and strongly adherent. No stone could be felt. The gall-bladder was then stitched to the abdominal wound, and subsequently opened on August 4. After the second day there was a free discharge of gall. Twice the patient had chills, accompanied with pain in the liver, and high fever, but after that the course was non-febril. The stools were for the most part entirely acholic, but occasionally traces of gall could be seen. The urine was of a light color, and free from gallic coloring matter. The appetite improved.

In spite of a most nutritious diet the patient continued to lose flesh, and after much persuasion agreed to submit to the operation of cholecysto-enterostomy. The first part of the operation was performed on September 29, 1890, and the gall-bladder fastened to the colon. A longitudinal incision was used, close to the rectus muscle, and from this incision another careful search for stone in the choledochus was made; but in vain, for the adhesions were so many and so firm that it was quite impossible to lay bare the choledochus duct.

The second part of the operation was performed on October 3, 1890. The intestine opened, and sewed to the gall-bladder. Iodoform tampon inserted in the abdominal wound. The patient continued to lose flesh; a few stitches cut through and fæces were discharged through the wound. Death occurred on October 6, 1890, from gradual collapse.

Autopsy: Peritoneum entirely smooth and glistening. Transverse colon adherent to the gall-bladder. Dense adhesions surrounding the gall-bladder, including the cystic, hepatic and choledochus ducts. No stone to be felt. Liver and neighboring organs removed; and the choledochus followed from the duodenum, and finally a stone the size of a cherry found in the choledochus close to the opening of the cystic duct.

Cholelithiasis; Dropsy of the gall-bladder with beginning empyæma of the gall-bladder. Occlusion of the choledochus duct; suppuration of the liver; cholecystotomy at two sittings; death.

Case XIII. Mrs. B., fifty years old. For three years past she had suffered from frequent cramp-like pains in the regions of the liver and stomach.

On the 31st of October, 1890, she was suddenly seized with severe chills, fever, pain in the region of the liver vomiting. There was intense icterus.

On November 3, the patient was greatly collapsed, her tongue dry, "sensorium" affected, and highly icteric. The abdomen was distended, and painful to the touch over the region of the gall-bladder, which latter organ was distended. Cholecystotomy at two sittings was performed.

On November 3, the first portion of the operation was undertaken. The gall-bladder, which was strongly adherent from below, was laid bare; it was impossible, however, to lay bare the choledochus duct on account of the adhesions. No stone could be felt. The gall-bladder was then stitched to the abdominal wound, and was opened on November 6. A light yellow gall was evacuated, and a few pus corpuscles, but no stones. Neither could any stones be felt in the cystic duct with the sound.

The temperature of the patient fell greatly, and she continued afebrile. The sluggish sensibilities were not improved and the icterus continued in spite of the discharge of gall.

Death occurred on November 16.

Autopsy: Peritoneum smooth and glistening. Dense adhesions at the under-surface of the gall-bladder. Even now no stone could be felt. The liver and neighboring organs removed and the gall-passage traced from the bowel, and a stone the size of a hazelnut found at an ulcerated part of the choledochus duct, close to the opening of the cystic duct. In the liver multiple abscesses were found, containing small gallic concrements.

(*To be continued.*)

PILOCARPINE IN DERMATOLOGY.

Employed hypodermically, pilocarpine has proven useful (Simon, in *Br. Mcd. Jour.*) in case of chronic eczema which had resisted baths, arsenic and iodides. One case was completely cured by 110 injections administered within as many days. The remedy is without effect in psoriasis, and seems contraindicated in subacute forms of eczema.

Communications.

ASTHMA: ITS INTRANASAL ORIGIN AND SURGICAL TREATMENT.*

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A few years ago and this subject was the talk of the rhinological world, being taken up on all sides with great avidity. As a result of this ardor much hasty work was done and conclusions drawn, and it seems now quite fitting that, with enthusiasm tempered by time and with the calmer judgment acquired by judiciously estimating results, we weigh matters pro and con, endeavoring to get at the exact truth. The question might then be put somewhat in this way: Are the present ideas which connect bronchial asthma in its pathology and causation with certain existing diseased conditions in the nose correct, *i.e.*, borne out by demonstrable facts? Secondly, do the results of the treatment, having in mind the relief and cure of these same nasal troubles, warrant their further continuance?

The endeavor will be to bring forward positive evidence in favor of above theories and to let the results of treatment as detailed by the author, after outlining the nature and methods of carrying out the same, speak for themselves.

In attacking the first part of the problem, let me carry you back into the history of its progress and development, for on such an occasion as the present anniversary, one is justified in referring to the past, that he may the more accurately portray the present. Something like fifteen or twenty years ago Voltolini reported some cases where, after the removal of nasal polypi, the asthma from which the patients suffered was relieved, and in one case permanently cured. Following the record of these cases numberless reports from various sources came to light and soon every specialist, at least, was bringing to light his achievements. Still further impetus was given to investigation and experiment by the results obtained by certain observers in the treatment of hay fever and hay-asthma by removing all the pathological conditions in the nose. The impetus thus given was tremendous, but soon a reaction became apparent, a revulsion of opinion which is to-day still evident. Especially in proceedings of societies one could see that while not doubting the fact that some cases could be relieved by treatment applied to nose, by no means as many were made to respond to said treatment as appeared in first reports, hence the method was brought into some disrepute. What popular idea does not suffer the same? The radicals, who were quoted as believing that any cases of asthma could be in a measure relieved by nasal treatment, were compelled to take a part of the statement, and the conservatism went along in the old rut worn deep by time, of asthma being a strictly nervous phenomenon, certainly a very non-committal statement. Neither position is tenable, but the latter makes no advance on the old theory of by-gone ages, and leaves us still at the mercy of nervines and potassium iodide.

Taking it for granted that I am understood in speaking of the nasal treatment as meaning those methods usually in vogue, namely, removing obstructions to easy breathing and aiming to attain permanent potency of both nostrils in as nearly equal degree as is possible, these ends being attained by the removal of polypi, cauterizing turbinate and other hypertrophies, and in various ways removing bony obstruction, we need not now attempt to analyze the results of these measures for it will be done later. Neither do I think we shall arrive at the reason for the difference in opinion as to effectiveness in this way, but far sooner in considering and in reconciling the views as to the nature of asthma, and the explanation of the various component phenomena which make up the classic attack of asthma.

There are two general classes of opinion as to the nature of asthma; the conservative which considers the entire affair as a purely nervous, hysterical manifestation, and would treat it entirely as a neurosis, and the radical, which would make it almost altogether a local phenomenon and allow the neurotic element to sink into complete insignificance. In other words, there must be some organic disease present, not merely diseased function. The only organic diseases which have been ex-

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tensively connected with asthma are those of the nasal cavities, and yet even the most radical of those who look upon the nose as *fons mali* make it, the nose, simply the starting point of the attack. This, of course, involves something out of order with the other parts of the respiratory apparatus, and perhaps of the individual as a whole, otherwise every one with nasal stenosis would be having asthma. The attack of asthma itself is generally explained in one of two ways, either that of bronchial spasm, or vaso-motor disturbance, both explanations being as one in the point of narrowing the calibre of the finer bronchi. Having decided which of these theories is the more rational, we shall then by easy transition prove that the nose originates the attack frequently, if not most always, and hence the logical outcome, that we must treat the nose in such cases.

The attack of asthma begins with a sometimes sudden, sometimes gradual feeling of oppression about the chest and a desire to cough. Perhaps there are also symptoms referable to the nose, either preceding this or at the same time, and these are sneezing, free secretion from the nostrils, with stoppage of one or both. Simultaneously there can be heard in the thorax small shrill whistles. As a result of this oppression or of the coughing, the person begins to inspire deeply, finds it difficult to get the air in and so is led to make greater and greater efforts. From the very first there is a marked contrast between the inspiration and expiration. The former always more marked, and resulting from greater effect than the latter, is now very much augmented, while by contrast the expiration is even less than usual and is made also with distinct effort, that is, there is obstruction to both inspiration and expiration. As the feeling of oppression becomes more intense the inspirations grow stronger and succeed one another more rapidly, allowing less and less time for expiration, especially as this is labored. As this continues but one result can be possible, namely, that of distension of the thorax, so that in extreme cases we find the chest walls almost fixed in position of full inspiration, while the patient still tries to take a little more air into his distended lungs that he may freshen his cyanotic blood. This extremely distressing condition of things lasts a variable time and suddenly or gradually there is a relaxation, something lets go, a more prolonged expiration is possible, the distension is relieved, and once more the patient has the breath of life within him.

Now, what have we here? Evidently—First, obstruction to the ingress of air into lungs—the oppression first noticed—and this must of necessity be one or another form of narrowing of the finer and large bronchial tubes as evidenced clearly and plainly by the fine whistles which had not previously been present, and later by the wheezing. Secondly, the air when once sucked in cannot easily get out again, something obstructs the egress of air. It cannot get out as fast as it comes in. Probably this latter is due to the same cause as first. Thirdly, as a direct result of one and two we have distension, expiration being at first difficult becomes almost impossible. Fourthly, a cessation of hostilities, that is, relaxation of the obstruction to breathing, always accompanied by a copious discharge from the mucous membranes of bronchi and nose, the relaxation being perhaps dependent on the latter, probably causing it. These secretions are always characterized, whether from nose or bronchi, by certain constituents, namely, asthma or Leyden's crystals, and so-called eosinophilous cells. Curschman has some peculiarly shaped spirals named after him, and other peculiarities have been described, but the first two are almost constant. These same things are present it is true at other times than when the attack has occurred, but are always much more abundant in the secretions, following the paroxysm. These facts involve the existence, first of a specific or asthmatic catarrh of the bronchial mucous membrane and especially nose. Secondly, as a result of above possibly, an irritability of the bronchial muscular fibers, which alone can produce any considerable narrowing. Thirdly, an exciting cause, atmospheric change, late supper, sudden cold, and numerous others. Fourthly, by inference and clinical fact the neurasthenic habit, which renders it possible for the three preceding to concur together.

We have then first to prove that narrowing of the bronchial tubes exists. If this is so, then, as intimated, the rest of the problem can be completely and adequately explained almost from a mechanical standpoint.

Bronchial spasm was one of the earliest explanations offered, but according to previous interpretation proved somewhat inadequate to the perfect clearing up of all the phases of the attack. As a result a new theory was proposed, namely, vaso-motor distension, and by others the first theory was supplemented and was supplanted by spasm of the diaphragm. This latter while not even necessary to help out the first, certainly as a complete explanation can be excluded without further discussion, for first, chronic spasm of the diaphragm only occurs with general tetanus; clonic spasm only in hysterics or by singultus. Secondly, who ever heard of an attack of asthma beginning with spasm of the diaphragm.

Have we any definite proof that bronchial spasm does exist in these attacks? First, we have the very important fact that there are muscular fibres in the bronchial tubes down to the very ends of the same, and that the contraction of these fibres does narrow the tube. Secondly, that such spasms do occur at other times in other parts of the body is sure, and I need only instance intestinal colic and stricture, as evidence. Then there must be some obstruction to the entrance of the air into lung, which did not previously exist, and which is bitterly complained of by the patient, indeed it is the first thing he notices. At the same time comes the shrill whistles in the chest, which can be explained only on the theory of air going through a small place, hence a smaller place than existed before they were heard, *i. e.*, a narrowed bronchial tube. Edinger and Riegel also long ago proved that stimulation of the vagus made the pressure in lung lobule or bronchial tube greater, and that a bronchial muscular contraction could be produced experimentally. Now, all of these facts receive still further proof in the experiments of Lazarus. Not satisfied with simply finding that pressure rose in the tube, he showed that in an animal that was apnœic and curarized, in which artificial respiration was being kept up, that a distinctly greater resistance to the entrance of the air into an air-tight lobule existed when the peripheral end of a cut vagus was stimulated. It requires a very slight current indeed to make a variation in the mamoneter. This, of course, must be due to narrowing of the bronchial tube. To exclude the other causes he injects into muscular tissue atropine, so that the stimulation of the vagus cannot affect the heart, and thereby excludes any vaso-motor influence, and he gets the same obstruction to the air current. Another interesting point was that by applying electricity to the interior of the nostrils with vagus intact, an exactly similar effect was pro duced upon the mamoneter, thus proving that irritations in the nose can have a direct influence upon the bronchial muscular tissue, and that this influence may be to narrow the calibre of the tube. Thus it is plain that the difficulty in getting air into lung lobule and also into chest must be due to spasm of bronchial muscular fibre.

The same muscular contraction must be the explanation of the difficulty in getting the air out of the chest. If a tube is narrowed it transmits the same amount of air with a greater resistance in which ever direction the air moves, in or out, or if the resistance cannot be overcome it transmits less. Our muscles being developed as they are inspiration can be made a more powerful effort then expiration, hence allowing that the amount of time was the same in the two cases, less air could go out than could come in when the inspiratory muscles were working their fullest purpose. Sometimes, however, inspirations heap up one on the other rapidly, then some inspired air of each effort must remain behind and by successive increment we soon have the lungs distended. If this should not suffice, however, to explain all the details, there is still another point. The researches of Miller, as stated in a preliminary report, show us that the lung lobules do not connect, and that the air space connected with any one terminal bronchus is, in proportion to the size of the tube, very great. For instance, the average bronchus ends as a tube about 0.4 m. m. in diameter. From this three to six openings lead away toward the end of lobule. These are called vestibules, are about 0.2 m.m. in diameter, and have as they leave the bronchial tube a complete ring of muscular fibre around them. They open into the atria, spaces twice as large as themselves, and from each atrium open two or three passages to the air sacs, which are twice as large as the atria. Around the air sacs are the air cells which bud out in all directions from them, each of them being about half as deep as a vestibule is

wide. Now, a simple mathematical calculation will show that even by flat measurement we have a space at least 12 to 20 times greater than the normal opening is from the bronchus to one of its vestibules, and 30 to 100 times greater space than the bronchus itself. Now, narrow this bronchial tube, make the openings from it by virtue of their own little sphincter of muscle also smaller, make your inspiration powerful to distend them thoroughly with air, then think what resistance these small openings will present to the air coming out. As the distension increases the openings may become pressed upon and narrowed still more, and as one inspiration follows on the other faster or deeper than ever, urged on by the stimulation of blood in the centers of respiration, we must have a balloon-like distension of the lobule and the impossibility of the chest walls collapsing as they should. If the spasm lasts long and is great, think how much these thin-walled spaces must become distended, the walls themselves stretched by the pressure of the chest walls, and is it any wonder that the confirmed asthmatic is found to have dilated vesicles and seems to have as a result but little motion to chest. Certainly abundant testimony tells us of the distension which must be due to air not getting out.

The relaxation of such a spasm may, of course be very gradual or sudden as was the onset. The simple relaxation allows the air to go out, the stagnant air in the lobules has a chance to be oxygenated, the inspiration becomes less forced, distension diminishes, and abundant discharge becomes evident both in nose and lungs. Here is where the vaso-motor men claim that the present theory is weak, but action and reaction are equal and in opposite directions. Certainly as regards the lungs we need no vaso-motor help. During the period of spasm there could not be free circulation, the walls of the capillaries would be relaxed, and when the change came what could be easier than transudation? And the secretion is very clear and frothy. To bring about the nasal secretion at the end of the attack, as also to connect the initial step in the attack from the nose and bronchial membrane, we have the experiments of Lazarus to help us out. But nevertheless a little vaso-motor influence must come in. Yet while granting this, I cannot see how any further effect can be laid to the door of the vaso-motor system. To suppose that by the slight narrowing of the tubes which would result from the distension of the blood-vessels in the bronchial mucous membrane, enough resistance could take place to explain all the phenomena of an attack of asthma is to me an absurdity. Again, why do we not have asthma in mild form by every attack of bronchitis when this latter is seen. Surely the blood-vessels are congested and that continuously, and if narrowing ever takes place from that cause it should be then. And again, to the best of my knowledge and belief it has never been demonstrated that the bronchial mucous membrene contains any such rich plexuses as would be necessary to produce any essential narrowing of the tubes by their engorgement. Even the later researches of Miller leave it doubtful, although he distinctly states that there is a rich capillary net work directly under the mucous membrane of the finer bronchioles. The venous radicals immediately leave the surface, gather into larger trunks, and then empty into the pulmonary veins, so there is not the interlacing of venous trunks near the surface which we more commonly find when a mucous membrane is distensible. Hence it would seem that the only use to which we could put the unquestioned association of reflex influences in the vaso-motor systems of the two places is to explain the initial step in the attack. Those who attach more importance to the various peculiar constituents of the sputa, the asthma crystals, and the eosinophilous cells, would reason that they perhaps indicated a peculiar form of catarrh in both nose and bronchi. Beginning in the nose perhaps there would be a vaso-motor disturbance which would lead to the secretion of these various materials there. At the same time these occur as a result of the same secretion in the bronchial tubes, and we have the irritation produced which brings on the bronchial spasm, the vaso-motor system being the link. When the spasm lets go at the end of the attack, free transduation takes place and the irritating particles are washed to the surface, while a similar event also transpires in the nose; vaso-motor system again the link. This puts a strong dependence upon the nose to start the attack. The nose is, of course, more exposed by its position than any other part of the respiratory tract,

hence more open to all irritating particles which come in contact with it. It is to be demonstrated beyond doubt that in the case of hay asthma, that the changes in the nose produce and precede the attack of asthma. Therefore, it is possible for a nasal lesion under proper conditions to produce or to initiate the impulse leading to an asthmatic attack, and, of course, if it can do it in this case, there is nothing wrong in the supposition that perhaps in most cases of asthma connected with nasal disease, the same may be true.

We have assumed that there is a sort of specific catarrh of both nose and bronchi, for we have the matter spoken of as always present both in and before an attack. Personally I have examined a few of these cases, and hope to do so to more, and have always found an asthmatic to have more eosinophilous cells present in his sputa than is usually the case in other catarrhal conditions, some apparently identical in appearance If the blood is examined in these cases we also find more eosinophilous cells than the normal, although they are not found exclusively by asthmatics.

In a young man at present being treated for mucous polypi, these same cells were abundantly present in the nasal secretion. During the course of the treatment he caught cold and had a slight bronchitis. When almost over this he came to my office and was operated on by removing a few polypi. His bronchitis immediately became worse as the reaction following the operation started up in the nose, and he had his first attack of asthma. His nasal secretion examined at that time, as also blood, showed many eosinophilous cells, more than he had before or has had since, and he has had other apparently equally severe colds with coughing and expectoration. Here is an indication too pointed to pass. First, the nasal disease existed with its altered secretion of a certain type; secondly, operating on the nose still further altered the secretion and blood as well, coming at an unfavorable time, and then he had his asthmatic attack, having previously acquired an irritable condition of the bronchial mucous membrane.

Now, while it cannot be said that the nasal disease always must previously have existed in order to bring about the condition necessary to produce the asthmatic attack, certain it is that such is frequently the case, and that in almost every case of asthma the nose is somewhat diseased. Secondly, as there is surely the nasal phenomenon beginning an attack of hay fever asthma, brought about by the pollen of the certain plant which produces it in the individual case, so also could it be possible that an atmospheric influence on a diseased nasal surface might produce an altered secretion, or might of itself be sufficiently irritating to start vaso-motor disturbance. Then either in this way or by the direct nervous reflex, as in the experiments of Lazarus, the bronchial mucous surfaces take up the disturbance and we have the attack. Further we can clinically bring on an attack of asthma by irritants, chemical and mechanical, applied to the nose and reversely stop attacks by cocainizing the nostrils. This is not to be understood as saying that every attack begins with the nose, for a late supper, or any other indiscretion of diet may be the source in some instances, but granted that most of the disturbances must be in some way connected with atmospheric conditions as would seem to be the case in that they seem to come by changes of weather, at a certain time of day or season of the year, then it is rational to suppose that the nose would get the first impression, and hence that this impression might originate the attack. To trace the exact nerve tract will be difficult for the experiments of Lazarus only prove that the pneumogastric plays some part, although, as just stated, it proved that it could produce in some way contraction of the bronchial fibres. Then, is it also mere chance that only certain classes of troubles of the obstructive and vaso-motor order occur in these cases in the nostrils; that the certain crystals and cells are present in the secretion both nasal and bronchial; and that in the case of the eosinophilous cells they are present in the blood of the patient, and are more numerous in the secretion at times of attack than otherwise? The exact answer to this latter point is not yet possible, but does present many interesting possibilities.

Confronted then with the facts, which I beg to bring once more before you, namely, that of the unquestioned connection of the hay fever nasal symptoms and the existing asthma, of the physiological experiments of Lazarus and others, of the position of the nose so clearly first to take the changes of atmosphere and the brunt

of many irritations, and the clinical fact that many of the noses in cases of perennial asthma are unquestionably diseased and in all there exist altered secretions, as also in bronchi and an altered blood, would it then be any severe stretch of imagination or reasoning to say that there might be a possibility that the severe nasal disease existing in any case of asthma might be the cause of the trouble? Not the only cause, perhaps, but sufficiently so that when the nasal trouble is removed the attacks of asthma would cease? And if this latter is the case may we not hazard the statement that bronchial asthma may be an intranasal disease, in the same sense that we might say that many ear diseases are intranasal, catarrhal diseases, for although local lesions exist there, still they are due to the previously existing nasal trouble, are produced by it, and cannot be cured until the latter is removed?

It would at this juncture be a pertinent inquiry: How many asthmatics came under this head? Very many indeed in the sense that the treatment was eminently successful in helping them, yes in curing them.

Ever since beginning practice, I have been steadily at work on various cases, accumulating observations and ideas on these points, somewhat unmindful of the work done by others. Lately a number of writers have presented tabulated statistics of cases, and showed a large number of cases cured and relieved by treating the nose. And curiously enough, I, who had not been a very great enthusiast, find my percentage of "cures" to be nearly as great as the most sanguine. Before giving any figures it might be well to define what cases are to be considered cured. We are treating the individuals for asthma and nothing else in this estimate, and we consider a person cured of his asthma who has none of his sharp, asthmatic attacks for a period of a year or greater. We do not feel ourselves as vitiating the statistics when we also consider a person cured of his asthma who may still possess the chronic bronchitis so frequently present in these cases, and who may be heard to wheeze a little after a hard coughing spell, or other severe muscular effort. As "relieved" we shall, of course, make two classes, those nearly cured and those but little benefited by treatment. A fourth column of failures will also figure in the description.

Dr. Bosworth gives in his book an exceedingly interesting tabulation of eighty cases of asthma treated for the relief of the nasal trouble, thirty-four were hay asthma, forty-six perennial asthma. Of these, nineteen of the first were cured, and fourteen improved; of the second, twenty-eight were cured, and twelve improved, so that out of the whole eighty only seven were not benefited by the treatment, and of this seven there were five cases in which the result is unknown. So that classing these last with the unimproved, and we still have a large percentage of improvement, forty-seven of the eighty cases were cured. This was in 1888, and in 1891 he could say that he felt quite confident that in but six of them marked "cured" have relapses occurred, and in none of them are the present attacks as severe or as frequent as the previous ones. Since then he presents tables of eighty-eight other cases of asthma, in eleven of which results are unknown. Of the seventy-seven, who were thoroughly treated, forty-two were cured, thirty-three improved, two unimproved, figures surprisingly close to the first ones reported.

I have to add to these figures the modest number of twenty-nine cases, twenty-three being perennial asthma and six hay asthma. Of the first, thirteen have been cured, five have had no attacks since treatment was well under way, but have not been long enough immune to be classed as cured. Three were improved, two unchanged except that their catarrh was better. The hay asthma was half improved, two cured, and one suffered very slight relapse last year. Of all cases which have applied for asthma during the time covered by the rest, in only two or three did I find nothing sufficiently wrong in the nose to consider it justifiable to operate. It will be seen from these figures that the results are very nearly the same as those previously reported, and as they were made entirely independently and without previous strong prejudice, as well as carefully compiled, their testimony is when taken with the others such, that "he who runs may read."

In all of the above cases within the experience of Dr. Bosworth and myself the nasal treatment was undertaken with the idea of relief and removal of some form of obstructive lesion in that cavity. My

own cases have presented a larger majority of polypi than any other single lesion. The others were either cases of simple but severe hypertrophies in various parts of the nostrils, or the same resulting from or complicating bends of septum or other bony deformities.

The mucous polypi make necessary the most varied and complicated methods of treatment, for in the end to remove and thoroughly eradicate the same one frequently has to do all the usual operations which we perform in the nose. First, we noose the growth out with snare, removing every portion possible, and ransacking every nook and corner for a hidden mass. Having done this thoroughly we then cauterize the places where these polypi grew, as also all other hypertrophies. If there is any bony projection which is so great that by the simple swelling which must take place in the turbinate tissue during atmospheric changes, contact is brought about, then that must be removed beyond such a possibility. This rule is observed in all this class of operations. If, after these things are done and the polypi do not return, we have produced no relief to patient, but little more can be done to ameliorate his condition except the older methods of treatment. The main point, however is to see to it that the polypi do not return, for almost as surely as one is found large enough to exercise any pressure in the nose, just so surely there will be a return of the asthma. Conversely, your patient may and very frequently does not get any relief to his asthma until every vestige of polypoid growth has been removed.

Simple hypertrophies are cauterized until the same changes spoken of before fail to produce any points of contact with the septum or other parts of the nose. Simple hypertrophies are found, be it remembered, not only on the turbinate bodies, but also on the septum, and these are particularly liable to be very sensitive. For cauterizing I always use the galvano-cautery.

For removing bony projections the saw, chisel, and gouge or burr, have proved ample to the end of establishing proper freedom.

When the operations are done as well as also during the entire interval of their performance, the patient is directed to keep the nasal passages thoroughly clean by simple salt solution, or Seiler tablets, the same being followed by some alkaline and anti-septic powder. This is kept up until all catarrh has been reduced to a minimum. But do not suppose that all this time the other portions of the patient's system are being entirely overlooked; far otherwise. In all cases where owing to long standing the bronchial disease has become fixed, the potassium iodide and terpine hydrate, alternately or together, are used to mitigate the cough and to assist expectoration, always being given in free doses. The patients are shielded from colds, directed to take cold baths, and where possible to avoid indiscretions in diet, to lead a temperate life, and finally when the treatment is done, or is futile, if at all possible, a change of climate is advised—the last step. Hay fever patients particularly are sent away during the dangerous period, and are put into as near opposite condition to their usual environment as possible. When this latter is done for either kind of asthma, it will avail but little, when nothing more radical is done, for as soon as patient gets back again, the same conditions will be operative that previously were, and the asthma will return.

When all the above means fail, then we have simply to make life as easy as possible for the patient, keeping down the severity of his attacks. Here, as in the attacks the patients have during treatment, considerable can be done to relieve the distressing spasm by burning some of the various forms of either pastille of prepared paper which have all the most useful elements, potassium nitrate and stramonium or belladonna leaves or both. Morphine is the one drug that is at all efficient in diminishing the spasm, although much may be done with chloral hydrate and bromide. A confirmed asthmatic is exceedingly liable to become an opium taker. Of the newer drugs prepared, I know nothing from individual experience. May I then give in closing a single case which will illustrate the main points of treatment and result.

M. B., aged 27, consults me concerning his catarrh, which has been very severe during the last few years, and which occasionally stops his breathing through the nose. Lately chest has troubled him. and his breathing has become short. Very lately some asthmatic attacks, occurring

once every twenty-four hours at night. Such reads the record of April 17, 1890. On examination of the nostrils found mucous polypi in large numbers in both nostrils. Treatment was immediately begun, and on October 30th we had the nose entirely cleared out. The attacks of asthma ceased some weeks ago, and remained away for two months, patient being during that time quite negligent, in spite of warnings, because he felt so well. He was gaining in health and strength, the latter having been much reduced by the loss of sleep occasioned by his attacks.

On December 12th, he again returned, having had several very bad spells, the worst being one night after a wine supper. Several new growths had begun to appear, and when they were thoroughly removed the attacks immediately ceased. He then had another respite and later, January 30th, started for a trip West, notwithstanding the fact that in two places there were still unreduced "polyp-rests" present. He reached Buffalo and was attacked with asthma. Turning back to Syracuse where he had friends, he consulted a specialist there, who kept him under constant attention, but things went from bad to worse, until he was having several attacks daily, some of them of extreme severity. He then made up his mind to return to New Haven and did so. I found numerous masses had developed on the old "breeding ground," which we had not thoroughly reduced, and as soon as these were removed his attacks ceased, he having only one attack after operation of the first day. Still he did not get entirely in order before he ceased his attention, and he has had two or three short spells of asthma since, each terminated by the removal of the diseased tissues. He is still unregenerated, is at present in one of his periods of respite, and therefore had to be put in the "relieved" column in our estimate of results, although he could be surely cured.

The above case is one of many of those whom we classed as being only "relieved," and shows in short the results of treatment, the necessity of the most thorough measures, and the reason why more cases are not perfected.

I feel, therefore, justified in the light of the facts with which I have burdened you well-nigh to exhaustion, in stating that we have fairly demonstrated that there is a causative association between certain nasal diseased conditions and bronchial asthma; secondly, that the results of the treatment of these conditions contribute as much to the relief and cure of the asthma as any other single method of treatment now known, and very nearly as much as all others put together.

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HYDROCHLORIC ACID IN THE TREATMENT OF VOMITING.

Dr. Alkiewicz, writing in the *Nowiny Lekarskie*, mentions that in various kinds of vomiting he has found great benefit from small and frequent doses of hydrochloric acid, well diluted, of course. In one case of the vomiting of pregnancy, where none of the ordinary remedies had any effect, hydrochloric acid proved successful, though it had to be given for a fortnight before it entirely arrested the sickness. In more than ten cases of cholera nostras in adults, with vomiting, hydrochloric acid was given with good results. Again, where vomiting was due to acute dyspepsia from errors in diet, and where it occurred in the course of influenza, scarlet fever, or other contagious diseases, the same remedy proved equally efficacious. —*Lancet.*

THE MECHANICAL TREATMENT OF TRACHOMA.*

By EDWARD JACKSON, M. D.,
PROFESSOR OF DISEASES OF THE EYE IN THE PHILADELPHIA POLYCLINIC, SURGEON TO WILLS EYE HOSPITAL, ETC.

The importance and dangers of trachoma, or true granular conjunctivitis, as a cause of suffering and blindness, and its spread by contagion, were well presented by Dr. J. A. Lippincott, in the address on ophthalmology, last year. An important factor in its transmission is its extremely chronic course. I have in mind a case which I saw and treated from time to time for ten years, the patient attending for a time, then getting weary and neglecting treatment for awhile, and anon returning with the cornea distinctly more damaged; aud during the whole of this period this patient was a possible centre of infection to those about her. And such cases are not exceptional, but extremely common.

It is rather exceptional to have a patient persevere steadily with treatment until the cure is complete. Last year I remember but a single case in my service at Wills Hospital who persisted steadily to the end, coming much of the time three times a week for applications of copper sulphate, and who was finally discharged completely cured just about a year after the treatment was commenced. There is still attending my service at the Polyclinic Hospital, for occasional applications, a girl who has been under pretty steady treatment with astringents for four years; and who is now about cured with some shrinkage of the conjunctiva. And during these protracted periods we have to deal not with sequellæ but with the active disease running its characteristic course. I cannot recall seeing a case of well-marked trachoma, even when taken early, that was thoroughly cured by applications of copper, alum, silver, and tannin in less than three months. Yet such treatment has been, and still is, mainly relied on for the radical cure of this disease.

In contradistinction to this, attention should be called to the results of mechanical treatment. Many attempts have been made in this direction, such as incising the trachoma granules, the little sago-like gray translucent masses that crowd the retro-tarsal fold and are scattered over the palpebral portion of the conjunctiva. Others have excised them, sometimes removing the whole retro-tarsal fold, greatly abridging the course of the disease, but also leaving a contracted conjunctival sac.

Others, led by Manolescu, had resorted to grattage, or brossage, scraping the whole conjunctival surface, or brushing it with a tooth-brush, the bristles of which were cut short to stiffen them, with or without the application of strong solutions of mercuric chloride. This latter method, if thoroughly applied, is effective in promptly cutting short the disease, but leaves such cicatrical contraction of the lids that its adoption seems scarcely justifiable.

In 1886 Dr. F. C. Hotz published his method of expression, which it is since claimed had also been practised many years before by Sir William Wilde and others. He pressed out the granulations from the upper lid and cul-de-sac with the thumb-nail, and from the lower lid by the aid of iris forceps, from which the corrugations had been ground off. This operation he urged could be done without a general anæsthetic; and he claimed that it greatly shortened the treatment of the most tedious cases, those with well-marked trachoma granules. I tried it, as did doubtless many others, under cocaine anæsthesia, and probably on account of failure to thoroughly express the contents of the granules, was not very much impressed by the method. Others, notably Drs. A. E. Prince and H. D. Noyes, devised forms of forceps for the operation, and practiced it with greater success.

Something over a year ago Dr. H. Knapp resorted to the roller principle, such as is applied in the common mangle or clothes wringer, to the expression of the trachoma granules, and devised a pair of roller forceps, here shown, for the purpose.

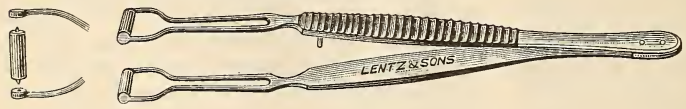
His results were extremely satisfactory, the mass of cases being cured by a single operation, often without necessity for subsequent treatment, and without cicatrices due to the operation. He reported them at the meeting of the American Ophthalmological Society last September, and they have been so far confirmed in the ex-

*Read before the Medical Society of the State of Pennsylvania.

perience of others who have tried the method that it should be adopted for all suitable cases.

The method of performing the operation of expression with this instrument is as follows :

The patient being fully etherized one of the lids is everted. In everting the upper lid I fold over the tarsal portion in the usual method of everting the lid, then seize the folded margin and withdraw it from the globe, at the same time everting it and fully exposing the upper cul-de-sac of the conjunctiva. The forceps are then thrust well into the cul-de-sac and as large a fold of the conjunctiva as possible is firmly grasped between the rolls. Firm pressure is then made and the rolls steadily withdrawn. As this is done the material composing the trachoma granules in the portion of the conjunctiva so grasped is seen to ooze out from the tissues on the rolls until the fold escapes from the forceps freed of this morbid material. A second portion of the conjunctiva is then grasped and similarly stripped, and this



is repeated throughout the conjunctival tract.

Especial care is to be given to the thorough cleansing of the parts of the membrane in the vicinity of the commissures, this being the most difficult part of the operation. The squeezing of the portion of the membrane lining the tarsal portion of the lids near their free margin is best accomplished by placing one roll on the conjunctival and one roll on the dermal surface of the lid, and drawing them up to the free margin of the lid.

In this way every portion of the conjunctiva is to be gone over two or three times until no more of the morbid exudate can be squeezed out. The conjunctiva is then to be cleansed of blood and exudate, and the after-treatment is to be directed to prevent undue reaction at first, and subsequently to prevent relapses.

The effect of this operation is at first to cause œdema and swelling of the lids, which gradually subside, leaving the favorable cases cured, with no more cicatricial contraction than was present when this treatment was resorted to. Indeed, in those cases in which there has occurred very marked cicatricial thickening and induration of the lid, the induration disappears entirely, and while there is later a tendency to its return the ultimate result appears to be a very marked permanent benefit.

The amount of benefit, however, is in general proportioned to the amount of the characteristic exudate present in and beneath the conjunctiva. Where this is the leading feature of the case the cure is immediate and, so far as I have been able to observe, permanent. But it is remarkable how much of this translucent jelly-like material can be pressed out of some thick indurated lids, that give very little evidence exteriorly of its presence.

In the favorable cases, those in which the granulations are well marked and the general induration and alteration of the deeper structures of the lid comparatively slight, a single rolling is sufficient. In the less favorable cases, those in which there is more induration and thickening, Dr. Knapp advises the free incision or scarification of the lid prior to rolling. In these cases, including the worst that I have encountered since resorting to this method of treatment, there was marked improvement after the operation, and it was repeated with still further improvement.

I have done the operation under cocaine anæsthesia, where the granulations were localized in a limited part of the conjunctiva, and the patient greatly preferred not to take ether. But the cases in which it is advisable to do it are quite exceptional, for without general anæsthesia the squeezing will not be thoroughly completed in every part of the conjunctiva, and it is only the thorough expression that produces the cures, which seem truly marvellous when compared with the results of older methods of treatment.

A word about the selection of the instrument: the essential point is that it should roll easily. This is first to be tested by seizing with it the fold of skin between the fingers, and noting if the rolls properly turn under very light pressure, and do not slide over the surface without turning. To ascertain if their motion is uniform grasp a piece of paper firmly between the rolls

and pull it out while firm pressure is maintained. If then the rolls are at all irregular in outline, or not properly centered, the movement will be found decidedly jerky instead of smooth and uniform as it should be. In using the instrument one must watch that it does not become clogged with blood and exudation and cease to roll, simply dragging over the tissues, for this does not as effectually empty them of the trachomatous matter, and is liable to cause tearing of the conjunctiva.

The corrugated rolls were adopted by Dr. Knapp, I believe, for the purpose of more certainly securing their rotation. I have also used smooth rollers with which it is essential to have the bearings work with perfect smoothness, but which, when they work perfectly, we would expect to empty the tissues more completely and with less bruising. It may be questioned, however, if a certain amount of bruising, enough to secure the free outflow of serous exudate, practically washing out the trachomatous matter as the tissue is gone over the second or third time, is not an important part of the treatment. So that on the whole the corrugated rollers are probably the better.

In conclusion, let me urge all who may have to deal with trachoma in its marked and characteristic manifestations, to put the patient under ether and roll the lids freely, squeezing out all the exudate possible and going over the whole conjunctiva two or three times.

Do not fear the apparent violence done the tissues. If the rolls turn properly, you cannot tear the conjunctiva; you will preserve all the epithelial surface there is to start with, and secure the minimum of cicatrical contraction. And in favorable cases a cure is accomplished by a single operation, sometimes without after-treatment.

CHLORIDE OF GOLD AND SODIUM IN PROGRESSIVE GENERAL PARALYSIS.

Boubila, Hadjes, and Cossa (*Annales Medico-Psychologiques,* January to April, 1892) state that this agent has no curative influence in general paralysis, but is useful in the early period, increasing the chances of remission, and in the later stages it tends to retard the fatal termination. Its administration is followed by an increase of red corpuscles and of body-weight.

A CASE OF OPERATION FOR CLEFT OF THE HARD AND THE SOFT PALATE, AS PERFORMED BY DR. R. W. WHITEHEAD.*

By GEO. HOMER GIBSON, M. D.,
DENVER.

On May 19, 1879, I witnessed an important and difficult operation for cleft of the hard and the soft palate by Dr. R. W. Whitehead. Frequently this operation results in failure, and the excuse is that the patient coughed or sneezed or vomited, or did something else and the stitches tore out. Dr. Whitehead emphatically stated before the operation, that if the muscles are completely cut and the sutures are properly placed and secured, that all the coughing and sneezing and vomiting will not cause the sutures to give away. I believe it. Those present at the operation were Dr. J. M. Norman, dentist, Dr. H. W. McLauthlin, myself, Miss McCann, nurse, and the father of the patient. The patient was a boy three years of age. In the performance of this operation the stages of procedure may be conveniently arranged as follows: (1) Gag. Dr. Whitehead's gag, as represented in Gross' Surgery and elsewhere. (2) Cutting the levator palati and the tensor palati muscles on each side with angular knives. (3) grasping the palato-pharyngeus and palato-glossus muscles on each side with Whitehead's forceps and cutting them with curved scissors. (4) Paring the edges of the cleft. (5) Making the side cuts and elevating the periosteum, guarding carefully against its detachment at the points of emergence of the superior or descending palatine arteries. (6) Passing the silver wire sutures and twisting as in Sim's operation for vesico-vaginal fistula. (7) Stuffing the side cuts with lint.

On the 14th day after the operation Dr. Whitehead kindly invited me to see the removal of the sutures. The union was complete throughout. The cleft in this case measured in its antero-posterior direction 1¼ inches, and transversely nearly ½ inch. For its closure it required six silver wire sutures and two silk sutures, the last two being placed near the tip of

*Read before the Colorado State Medical Society, June 24, 1892.

the uvula. The main requisite for the surgeon in this operation is to bring to his aid a perfect knowledge of its anatomy, including the relations of parts, and a full appreciation of the action of the muscles. It is an operation founded on principles strictly scientific, and is one of the most difficult in the whole range of surgery. Anything less than the most painstaking care of its details will result in failure. Yet a first attempt may be entirely successful, as in Dr. M. Storr's case, related in a letter to Dr. Whitehead, which he kindly showed me, and in which letter Dr. Storr states that he was opposed by the whole of the surgical staff of the Hartford Hospital and Dr. Storr "made one operation and got entire union." Such Dr. Whitehead says he believes will be the result in the hands of any painstaking surgeon of fair ability, who has qualified himself by a sufficient practical study of the anatomy of the muscles and other parts.

LOW TEMPERATURE AND PHTHISIS.

Of all devices which, since its discovery, have been attempted to destroy the bacillus tuberculosis in the body none, perhaps, is more irksome—and, indeed, barbarous—than that of keeping the unfortunate victim of phthisis in a cold temperature, as if the normal temperature of the blood were in the very least affected by that of the atmosphere. Nevertheless, such views are held by the Russian physicians who have the care of the health of the Czar's second son, the Grand Duke George, who developed symptoms of pulmonary disease when on his Indian tour. He has, we learn, been spending the winter at Abbas-Tuman, in the Caucasus, dwelling in barely furnished rooms, with little bedding, only a very moderate fire, and the windows continuously open. No doubt the pure mountain air is the chief agent in the effort to keep the disease in abeyance, and not the cold, which has been so severe that his Royal Highness's attendants have suffered greatly from it; and we trust the hopes of the physicians that the Grand Duke will in two years' time have completely recovery may be realized. Very likely he would have done equally well at Davos or St. Moritz, without a sacrifice of that comfort which phthisical patients so much need.—*Lancet.*

CASE OF ECZEMA VENOUS VARAIX, WITH TREATMENT.

By A. O. STIMPSON, M. D., C. M.,
THOMPSON, PA.

J. S. (an old soldier) has been troubled with eczema venous varaix ever since he was in the army, 1864 and 1865. Since that time his lower extremities have been more or less swollen and painful especially when he was obliged to be on his feet. He is a hotel keeper by occupation, and no doubt is a liberal sampler of his own liquid refreshments. He is a man of 5 feet 11½ inches, and weighs about 187 pounds, a man of very irregular habits, an Englishman and of apoplectic tendencies. I have known the man for twelve or fifteen years but have never been called upon to treat him until June 14th. At 5 o'clock A. M. on June 14th, 1892, I was called up in haste to attend him. The messenger informed me that he was bleeding profusely from a ruptured artery on his leg. I hurried up to the house and found him lying back on the sofa in a semi-exhausted condition from the hæmorrhage which had indeed been profuse, as pools of blood lay about the floor where he had sat in the kitchen. On examination I found his left leg in a condition of chronic eczema complicated with large varicose veins. He informs me that within the past six or seven years he has suffered occasionally from hæmorrhage, but that it has always been easily controlled by simple bandaging. I found on examination that the hæmorrhage proceeded from the external saphenous vein, as if an artery had been cut across. I put on a rubber ligature above the knee, washed the leg and wound, then took antiseptic cotton saturated it with tinct. of iron and packed the small opening with it until the hæmorrhage had stopped. Then I made a firm compress of carbolated cotton, saturated it with a forty per cent. carbolic acid solution, then put on a firm bandage of muslin from the toes up to three inches above the knee. I am confident that there will be no further trouble as I put him on a constitutional diet with eight drops tinct. of iron and three drops fluid ex. ergot, to be taken every four hours. The cotton bandage is to kept on five days and then a Martin's rubber bandage to be constantly worn. Also, after the

five days he is to take five drops of Fowler's solution of arsenic one half hour after meals, *ter in die,* in order to cure his eczema.

EFFECT OF BITTERS ON GASTRIC MOVEMENTS.

Dr. Paul Terray of Buda-Pesth has published on account of some investigations he has recently made, with the view of determining the effect of various bitters on the movements of the stomach. For this purpose he employed the stomachs of dogs taken from the body immediately after the animal had been killed by severance of the crevical spinal cord. Both orifices of the stomach were then tied and the organ was immersed in a bath of water which was at the temperature of the living body and contained in solution 0.75 per cent. of common salt. Where no drugs had been introduced the automatic movements continued for about three-quarters of an hour, after which time signs of death began to appear in star-shaped contractions; and in another half hour mechanical stimuli ceased to produce any response, irritability being subsequently lost, first to cold water, then to the galvanic current, and lastly to hot water. When the animal was kept on a restricted diet for two days, and a quarter of an hour before being killed a dose was introduced into the stomach of some bitter which acts on the peripheral automatic centres of the stomach, the movements were stronger, more rapid, and more persistent—the most powerful drug being gentian, and after that cetrarin and condurangin; then there came taraxacum, quinine, and lastly quassia. The irritability of the stomach to mechanical stimuli was increased by gentian, taraxacum, quassia, strychnine, and columbine. Small doses of absinthin diminished the irritability, and large doses arrested it altogether. Columbine and strychnine increased the irritability until persistent general contractions were induced. Picrotoxin produced no effect on the contractions, while cetrarin not only set up increased movement in the stomach, but produced a similar effect upon thei ntestinal movements. From a therapeutic point of view, therefore, it appears that in atonic conditions and moderate dilatation bitters may be given with advantage. Cetrarin, it may be well to remark, acts as an aperient in addition to its effect upon the stomach.—*Lancet.*

Society Reports.

MEDICO-CHIRURGICAL SOCIETY, OF LOUISVILLE.

Stated Meeting July 24, 1892.

Dr. Thos. L. McDermott, Vice-President, in the Chair.

THE REMOVAL OF ENLARGED LYMPHATIC GLANDS.

Dr. W. L. Rodman: This young man is a patient that I operated on six weeks ago to-day and reported the case the same night at meeting of the Medico-Chirurgical Society, at the Pendennis Club. He had a tumor in the inguinal region caused by enlarged glands, the mass being as large as a duck egg. I cut down to the glands and dissected them all out. Dr. McDermott assisted in the operation. The operation was done on Friday afternoon and he went to work the following Wednesday. It was one of these idiopathic enlargements; patient has had no venereal disease. I removed eight or ten very much enlarged glands, cutting very nearly down to the femoral artery. By the operation I think I saved this patient at least six weeks suffering, and believe that this is the best way to treat these enlarged glands.

Dr. C. Skinner: I think this case illustrates a point, and proves that these cases all ought to be operated upon in this way. There is no doubt about such cases always going on to suppuration. I believe it is better to remove the glands in the start rather than allow suppuration to take place and then open them. The results in Dr. Rodman's case seem to be everything that could be wished.

Dr. W. L. Rodman: When the operation was performed, the patient was very much run-down in health. He has gained at least ten pounds since being operated upon six weeks ago.

Dr. Turner Anderson: I would like to ask about the scar that is so plainly visible now; will it not disappear after a while?

Dr. W. L. Rodman: I think it will go away. This scar would not have been as marked as it is now, if I had not kept the wound packed. I did not want it to heal too soon.

Dr. Turner Anderson: What do you think will be the effect upon the lymphatic structures upon which these glands act situated below? That is, will it interfere with their functions in any way?

Dr. W. L. Rodman: I do not see how it would interfere with the channels; the lymph gets back in some way without any doubt. The deeper lymph glands were not removed.

Dr. T. L. McDermott: There are a great many glands in this region, and I do not think it is reasonable to assume that they were all removed.

Dr. W. L. Rodman: I removed all the superficial glands.

Dr. S. G. Dabney: In this connection, I would like to ask one or two questions about enlarged isolated lymphatic glands. I saw a case the other day, a young lady, having enlarged glands just back of each ear. There seemed to be no cause for this condition; the lady was otherwise in perfect health. There was no involvment of the cervical glands, but simply the glands just back of each ear were enlarged and quite tender. I would like to ask if there is any reasonable explanation of the appearance of these isolated enlarged lymphatic glands, and what the treatment should be. Also whether the treatment of iodine ointment is of any value.

Dr. C. Skinner: I have always found that we can trace this down to some hereditary trouble; some specific lymphatic engorgement. Cases of this character that have come under my observation, I have put on treatment consisting of a preparation containing bichloride of mercury. They may feel and look all right, but the lymphatic system is out of order, the circulation bad, and the treatment should be with a view of improving these conditions and then the enlargements will disappear.

Dr. W. L. Rodman: I would like to ask if Dr. Dabney's patient had any bad teeth.

Dr. S. G. Dabney: That is a point I had not thought of, and made no inquiries concerning the teeth.

Dr. Turner Anderson: Enlargement of the posterior cervical glands is not at all unusual, occurring in an acute form. In the last epidemic of German measles this symptom was present; it was present in nearly all cases; an enlargement of the chain of glands of the neck was one of the prominent symptoms. I do not think we have any reason to believe that there is anything specific about these enlargements. I believe it is simply acute adenitis, catarrhal in all probability in a great many cases. My experience is that these enlargements go down without any treatment. They occur just as we sometimes see enlargements of the inguinal glands occur in an epidemic way. I saw an epidemic of inguinal adenitis several years ago, a great many cases presenting themselves. We are constantly seeing cases of idiopathic inguinal adenitis.

Dr. T. L. McDermott: Concerning the removal of these enlarged inguinal glands—this is a matter that is not pushed far enough by the medical profession. I think that the doctors in ordinary practice, who meet most of these cases, instead of suggesting that they be left to the processes of nature, allowed to suppurate and the abscesses finally be opened, allowed to take their course, they should advise the early removal of all these enlarged glands. People as a rule are not educated to the idea that this is the proper treatment. This young man may be the means of getting a half dozen of his friends to submit to this operation. I believe that the profession ought to take more cognizance of these cases and advocate operation more than they do, and educate people to this idea. The result in Dr. Rodman's case seems to have been all that anyone could wish. I am satisfied if the operation had not been done, the patient would have been coming to my office two or three months, would probably have spent two or three weeks in bed and had the enlargement lanced with a good deal of pain, etc. I think on the plea of economy it would be cheaper for patients to have these glands removed. I believe that eneucleation is the only proper treatment, and we should try to educate people to have this done.

Dr. W. L. Rodman: I have been operating in this manner for two or three years.

Dr. C. Skinner: While on the subject of glands, I will relate a case. Some time ago a gentleman brought his boy, about seven years of age, to see me. The whole family history is phthisical, one sister of the mother having died of this disease, and the mother having had two or three

alarming hæmorrhages. This child had an enlargement of the sub-maxillary lymphatic in the right lower jaw midway between the angle and the symphysis, which was very tender on pressure. He had been to see a dentist and had one tooth extracted, another tooth in the vicinity appeared to me to be loose. I gave it as my opinion that it was one of two things, either tuberculous glands, or an epulis, rather inclining to the view that it was a tuberculous gland. I asked him to let some one else see it. He took the child to another physician, an examination was made and the physician advised them to wait, that he did not think the bone was involved at all, and let it suppurate then open and scrape it out. I had advised immediate removal of the gland. I want to ask the members of the Society present which of the two procedures would have been preferable, that is granting that it was a tuberculous gland, would it not have been better to have removed the sac and gotten rid of all the tubercle bacilli in order to prevent further infection of the system, rather than to let it suppurate ?

Dr. Turner Anderson: Was the cavity of the tooth still open ?

Dr. Skinner: The effects of extraction had disappeared, but another tooth seemed to be loose. The child passed out of my hands, and I learned afterward that this gland was scraped. The family history pointed strongly toward tubercular infection.

Dr. W. L. Rodman: I should judge from what Dr. Skinner has said about the case and the history, that it was most likely of a tuberculous nature. I fully agree with him that the only thing to have done was to dissect out this chain of large glands.

Dr. Turner Anderson: How long had the large glands existed, the loose tooth, etc. ?

Dr. Skinner: I think about four weeks.

Dr. Turner Anderson: I do not think I would have advised any operative procedure in such a case. It is doubtful if suppuration would have occurred. With a history of only a few weeks I think it would have been very active surgery, and believe I would have waited a little longer before advising an operation.

Dr. W. L. Rodman: It is only a question as to whether you open before suppuration takes place. It is a very easy matter to remove those glands by making an incision along the inner angle of the jaw. I have never seen an acute abscess form in that situation, and believe they are all tubercular.

Dr. T. L. McDermott: A little fellow about four years old was brought into my office some time ago having such an enlargement on the bone. I treated this with warm applications and it disappeared in ten days or two weeks without suppuration. I think our action in such cases should depend a great deal upon the character of the infection, if it seems to be spreading increasing rapidly, or if any symptoms point toward softening, then I believe radical measures should be adopted.

MENINGITIS.

Dr. S. G. Dabney: I reported a case to the Society some months ago, of a child who had paralysis of some ocular muscles of the right side, the external rectus muscles of the right eye and partial paralysis of the same side of the body, both upper and lower extremities. I reported at the time that the history was the child had sustained a fall, also had an attack of meningitis, both of which, however, were so long before the appearance of the paralysis as to have hardly caused the lesion. I merely want to say that the child has since died. I have never seen the patient since, but I learn it died of meningitis.

ACQUIRED HYDROCEPHALUS.

Dr. Turner Anderson: I would like to continue report of a case:—The child (clinical case) that I presented at the last meeting of this Society, suffering from acquired hydrocephalus, died a few days ago. The man I exhibited having an irregular pulse is now anasarcous, has a very well marked tumor in the epigastric region, which seems to be the left lobe of the liver. Still has disturbed circulation, and is simply growing worse all the time.

PECULIAR CASE OF LAPAROTOMY.

Dr. C. Skinner: I want to mention a peculiar case of laparotomy performed at the city hospital a short time since for double ovarian cyst. One cyst was about the size of a large cocoanut, and was absolutely without a pedicle. I never saw anything like it, the cyst was only fastened by adhesions, I separated adhesion after

adhesion expecting of course to find a pedicle, but when all the adhesions were broken the tumor simply fell out upon the table. The other cyst was smaller, about the size of a goose egg, lower down and more firm than the larger one. This was tied off and removed. The large cyst having no pedicle, I suppose had simply lived from the adhesions which had sprung up around it. The woman has done well, has had no fever.

DR. TURNER ANDERSON: What was the condition of the ovary on the side having the large cyst?

DR. C. SKINNER: I could not find the ovary; it was probably lost in the mass alongside the tube.

DR. T. S. BULLOCK: I saw this case and was very much surprised that there was no pedicle. The tumor was lifted up to the abdominal wall and its own weight broke the attachments and it fell on the table. I never saw anything like it.

DR. TURNER ANDERSON: Did you examine the structures after the cyst was removed?

DR. C. SKINNER: Yes, everything was examined carefully.

DR. TURNER ANDERSON: Might it not have been a par-ovarian cyst?

DR. C. SKINNER: Possibly, but the ovary could not be found. The other ovary was found, the cyst on that side not having gotten so large.

DR. W. L. RODMAN: What was the character of the fluid in the cysts?

DR. C. SKINNER: It was about the color of urine, about like ordinary serum.

DR. T. S. BULLOCK: I noticed Dr. Skinner tie something which he supposed was the pedicle of the large cyst, but afterward found it was not.

TREATMENT OF HICCOUGH.

Hiccough is sometimes a very troublesome symptom, and in some cases may be difficult to overcome. Leloir, in a case of a child twelve years old suffering from persistent hiccough, applied digital pressure for three minutes to the left phrenic, between the two attachments of the sterno-mastoid; the hiccough stopped and did not recur. He has since used the method in a large number of cases, and always with success; in some cases pressure for a few seconds has been sufficient, in others a few minutes.

Selected Formulæ.

SUBSTITUTE FOR OPIATES.

Dr. Portier (*La Semaine Médicale*, No. 19, 1892) recommends the following as a substitute for the preparations of opium:

℞ Hydrochlorate of cocaine.....cgms. 50.
Phenacetin.....gms. 1.5.
Exalgine.....cgms. 50.
Salicylic acid.....gm. 1.
Divide into ten powders. Take one powder every two or three hours until the pain ceases.

AN IDEAL DRESSING FOR ABDOMINAL WOUNDS.

Kelly (*Am. Jour. of Obstet.*, December, 1891) states that an ideal dressing should be a paste, which would harden quickly—thin, flexible, transparent, impenetrable, which would hermetically seal the wound from external septic invasion.

After closure of the incision, the skin, the line of the wound, and the sutures are dried, and two layers of sterilized gauze or cheese-cloth, large enough to project five to ten centimetres (two to four inches) beyond the incision on all sides, laid on the skin. This is saturated with the following adhesive mixture, which is evenly distributed over the whole surface:

℞ Squibb's ether, or washed ether, and alcohol, absolute, equal parts.
Bichloride of mercury (Merck's recryst.), enough to make the solution $\frac{1}{1000}$.
(Anthony's) snowy cotton, enough to make a syrupy consistence, adding in small pieces, stirring.

As soon as this is poured over the wound evaporation begins to take place at once, and the celluloidin hardens, gumming the gauze fast to the skin. To avoid delay in waiting for this to grow quite hard, and to prevent adhesion to the cotton applied above it, the whole surface is freely dusted over with a finely powdered mixture of iodoform and boric acid:

℞ Pulveris iodoformi, 4 grammes or 1 drachm.
Acidi borici, 28 grammes or 7 drachms.
M.—Exactissime. Sig.—Dust freely on wound.

This powder is of itself an invaluable protective. I use it constantly in obstetric cases, separating the labia and throwing it into the vagina, where it acts as a guard to the vaginal outlet against septic invasion from without.

The wound thus sealed with celluloidin gauze may be left untouched for a week or more, when the dressing should be softened with water, or more rapidly with ether, the gauze lifted off and the stitches taken out.

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Leading Articles.

INSANITY AND CRIMINAL RESPONSIBILITY.

The term "medical expert" as used in the criminal courts is one which frequently tends to make the profession the laughing stock of the public at large, and it has become a by-word that such testimony is a reproach rather than a credit to the profession. A noted lawyer upon being asked what in his consideration was the best life preserver, answered promptly, insanity. This is true enough, thanks to the medical expert. It must indeed be anything but comforting to those members of the profession who keenly feel its responsibilities to the public that so large a number of murderers and other criminals are not only saved from a just punishment through the endeavors of these experts, but again thrust upon the public to be a constant menace to society.

This important subject may be viewed from two points: First the validity of the so-called expert testimony; second, the value of insanity or mental peculiarities or weaknesses as an excuse for crime.

The first point is one that can only be briefly touched upon in this article. The term "medical expert" is one that has absolutely no value and frequently no meaning. Anyone having the title Doctor of Medicine can claim to be a medical expert. In America the student who attains his degree with little or no preliminary education and after a few months' study, and the student who has passed brilliant preliminary examinations and obtained his degree after a four or five years' course in our great medical schools, both arrive at the same end as far as the public are concerned—they are "doctors" and here the matter ends. The title of "medical expert" may be claimed by one as well as the other—and more likely by the former than the latter. That criminal lawyers make active use of this vast uneven-

ness is only too patent, and the mass of absurdly contradictory and untruthful evidence frequently elucidated when such expertism is called into requisition redounds to the great discredit of our honorable profession, and renders the value of evidence from reliable sources almost as questionable as that obtained from unworthy witnesses.

Naturally there are unprincipled men in the medical profession as in every walk of life, but a vast amount of the worthless evidence given in court by medical experts is the result of the deliberate suppresion of the truth or of absolute ignorance. To be an expert on insanity means a life-long experience with such cases, and only those who have made mental and nervous diseases a specialty should be permitted to give evidence as experts.

But to turn to the other point at issue—Is insanity or mental peculiarity and weakness a valid excuse for crime?

The Latin poet has justly said that *ira furor brevis est*, and criminal lawyers making use of the theory are content to prove that their clients were insane only at the moment of the commission of the crime, and therefore irresponsible. A glance at the results of coroners' inquests in the case of suicide reveals the great predominance of the verdict "*felo de se* while laboring under temporary insanity."

Indeed, some authorities go so far as to say that no one in the possession of their mental faculties would voluntarily take their own lives. Would not a similar contention be applicable in case of murder and other revolting crimes? Again, in cases where the criminal is evidently of a very low mental calibre, in whom bestiality and brutality are inherent traits, is it justice to credit him with the same amount of moral responsibility as an educated or sane man?

All this is theorizing, but theorizing that is made active use of in our criminal courts, and theorizing which, to the disgrace of the so-called medical expert, turns out yearly from behind the bars a large number of dangerous criminals.

In the enforcement of the extreme penalties of the law, two points are held in view: First, the example to others; second, the public welfare.

In what manner the public welfare is to be conserved by the acquittal of the criminal insane or criminally irresponsible is not apparent. If such an acquittal meant a confinement for life or until the individual's mental condition had become such that he was no longer a menace to society, it would be another thing. It is only too common that when such criminals are subjected to confinement it is but a short time before they are liberated, but their mental condition unimproved.

The case of Deeming which recently engaged the attention of the civilized world is that of a man who has made murder a pastime—murder in its most brutal and barbarous form. Not only murder, but theft, forgery and a whole list of other crimes. A man in middle life, and until his arrest able to earn for himself a good livelihood; successfully act a series of different parts; travel extensively; court, marry, and become a father. For years he succeeded in adroitly covering up his atrocious deeds. He was finally brought to justice, his lawyer spoke of him as "the abnormal offspring of a mother's womb," medical experts came to his rescue and endeavored to prove by various facts that he was morally irresponsible for the crimes he committed. The question is, should such a condition justify acquittal. In aiding the acquittal of such monsters our medical experts are confronted by a most grave responsibility, which we fear is in many cases unrecognized. To declare a man mentally deficient, morally debased, or intellectually wanting, and to prove that his mental organization is of low calibre, his moral instinct dulled through disease or inheritance is well enough, but

to assert the absence of moral responsibility and the justifiability of acquittal is a step too far.

Book Reviews.

HOW TO FEEL THE PULSE AND WHAT TO FEEL IN IT. By Wm. Ewart, M. D., Cantab., F. R. C. P. Physician to St. George's Hospital, London, etc., etc. New York: William Wood & Co., 1892.

This little book deals with a subject which is at the present time very much slighted. Consequently we have perused its pages with a considerable degree of interest.

The author coufines himself strictly to elementary facts, and does not burden the text with statements of the various pathological conditions in which certain variations in the pulse-wave exist. The principles which govern the study of the pulse are fully but simply set forth, and brief neccessary reference is made to the more common diseases which markedly influence it.

Admirable features of the book are its brevity, the bold headings, and systematic subdivision of the subject into very appropriate parts.

The classical forms of irregular pulse receive proper attention.

It is a most excellent work of its kind, and will be found profitable reading for both student and practitioner.

DISEASES OF THE NERVOUS SYSTEM. By Jerome R. Bauduy, M. D., LL.D., Professor of Diseases of the Mind and Nervous System and of Medical Jurisprudence, Missouri Medical College, St. Louis. Philadelphia: J. B. Lippincott Co., 1892.

We are led from the title of this book to expect a more or less complete treatise on nervous diseases. We are told in the preface that the work is the product of "a long, studious and extensive experience." In fact, it consists of long quotations, with an occasional interpolated paragraph or page which is usually of far less value than the borrowed matter. It is, of course, quite out of the question to write an entirely original work on this subject, but the reader can justly demand that the author shall give him something more than a scrap book of other men's ideas. However, judging from the author's interpolations, we are extremely thankful that the borrowed matter is so voluminous.

Eighty pages are devoted to a subject which may or may not have a pathological existence, viz. cerebral anæmia and hyperæmia. Twelve pages are devoted to the certainly not vitally important question of neomembranes of the dura mater. Inflammatory diseases of the membranes are discussed.

The above includes the entire contents of a book purporting to deal with diseases of the nervous system.

The polypharmic tendencies and therapeutic faith of the author are shown in his combination of three varieties of pepsin in one prescription.

He states that "anatomical detail and physiological discussion have been thought inadmissible," yet he gravely tells us that the vaso-motor nerves go to the elastic coats of the arteries, and makes no mention of the muscular coat the true seat of distribution.

In conclusion, we must admit that this is one of the poorest books we have ever read.

INFECTIOUS MULTIPLE NEURITIS FOLLOWING FACIAL ERYSIPELAS.

Leu, (*Charité-Annalen*,) reports the case of a patient who came under his observation in the hospital suffering with some slight symptoms of neuritis. The accession of the disease had taken place immediately on convalescence from facial erysipelas and had appeared to be a mild attack of articular rheumatism. There was only a slight paræsthesia of the lower limbs. Following this came a sense of pressure in the main nerve trunks, with disappearance of the patellar and cremasteric reflexes. There was also marked subjective and objective sensory disturbances, with impairment of electrical reaction of the muscles and nerves to both currents, which eventually gave the reaction of degeneration. Atrophic changes took place rapidly. The height of the fever was in no proportion to the pulse acceleration. The breathing was very difficult in consequence of deficient innervation of the muscles of respiration. There was a peculiar desquamation of the skin of the the extremities, with excessive hyperidrosis of the entire body and a miliary exanthemata over the breast, abdomen and back. Albumin was present in the urine. The spleen was distinctly enlarged.

Periscope.

THERAPEUTICS.

A NEW BORIC ACID PREPARATION IN THE TREATMENT OF CHRONIC PURULENT OTITIS MEDIA.

Dr. Max Janicke, of Görlitz, recommends the use of a neutral borate or tetraborate of soda, in the treatment of chronic purulent otitis media. This preparation is obtained by heating equal parts of boric acid, borax and water. Upon cooling, the precipitate will be found to be neutral in reaction. It is soluble to the extent of 16 per cent. in water at the ordinary temperature of the room, while in boiling water it is soluble to an almost unlimited extent. This salt possesses the valuable peculiarity that, unlike other salts, it does not precipitate from its hot concentrated solution immediately upon cooling. Precipitation does not occur for some time after cooling, so that solutions of 50 per cent. may be used in the drum-cavity. Thus, a large quantity of an antiseptic material can be introduced into and kept in the drum-cavity for a long time. Once in twenty-four hours is often enough to apply the solution in cases of moderate discharge, while in slight discharges less frequently will answer. The neutral borate of sodium is extremely mild and unirritating. After the use of the above-named solution in cases of large perforation in a total of the membrana tympani, some of the same neutral salt may be blown into the ear.—*Archiv fur Ohrenheilkunde,* vol. xxxii pp. 14-24.

OXYGEN INHALATIONS.

In an interesting contribution to the *Chicago Médical Recorder,* Dr. N. S. Davis, Jr., remarks:

Briefly it can be said that the indication for oxygen inhalations in respiratory affections is cyanosis. It can be expected to give prompt and very great relief in acute dyspnœa with cynanosis; such as often accompanies asthma, acute capillary bronchitis, broncho pneumonia, croupous pneumonia, œdema of the lungs, or pneumothorax. Usually œdema of the lungs develops at a time when permanent relief is impossible, as the patient is already too much enfeebled to combat the primary malady, but the best results can be expected when œdema threatens or develops early while the heart and respiratory muscles are still fairly vigorous. Good results can be hoped for in a self-limited-disease of short duration such as croupous pneumonia, for by oxygen sometimes life can be maintained until the crisis in the malady is past. Unfortunately, as the reports of its employment in pneumonia show, when cynosis and œdema develop, the case rarely terminates by crisis, but is prolonged. As digitalis finally fails to stimulate a flagging heart that is extensively degenerated so in pneumonia, oxygen, though signally efficient at first, finally fails to maintain a good degree of oxygenation of the blood.

A degree of greater well-being can be expected even in chronic dyspnœa, but it will be less marked than in acute.

TREATMENT OF SYPHILIS BY EUROPHEN.

Following Eichhoff, Petersen, etc., Dr. Gaudin had experimented with europhen (iodide of isobutylorthocresol) in the treatment of syphilis. He employs a solution in oil in the proportion of five grains of europhen for a hundred cubic centimeters of oil of sweet almonds, injecting up to five cubic centimeters at a time of this solution by means of the Burlureaux injector. There is a great advantage in employing oil as a vehicle in europhen, in fact, it dissolves a large quantity of the drug, and it is well known that oil, employed as a subcutaneous injection, is not painful and does not produce abscesses of the skin. The conclusions of the author are as follows: The subcutaneous injections of europhen in oil are well borne, although they are at times a little painful; they never provoke accidents, either local or general; they constantly ameliorate the syphilitic manifestations of the tertiary stage, although he cannot state that he has obtained by this means complete cures; they seem to act as quickly and as well as solutions of gray oil or of sublimate; they can thus be employed when we wish to produce a prompt and energetic action in cases of severe symptoms. However, the author recognizes the fact that these injections have little effect on the secondary manifestations in course of evolution. We may thus ask if we can really count upon the efficacy of this treatment in syphilis.

MECHANICAL TREATMENT OF ASTHMA.

Dr. Goebel treats asthma by rapping the posterior portion of the chest quite violently, until the entire thorax is set into rapid vibration. This improves the circulation and also influences favorably the emphysema upon which the disease is based, stimulates the atrophic vesicles, and thus indirectly betters the nutrition of the lung. Although the writer has used this method in but a small number of cases, he feels that he is justified in bringing it to the notice of the profession, as he has obtained such good results in the cases treated.

EUPHORBIA PILULIGERA IN HAY ASTHMA.

E. S. Blair (*Therap. Gaz.*, March, 1892) records a troublesome case of hay asthma in which administration of a fluid extract of euphorbia piluligera gave the happiest results. The patient was a child of 10 years, who every August suffered from attacks of the disease. While administration of the usual remedies altogether failed to procure relief, the new drug was rapidly successful, not only against the primary attack, but in cutting short any recurrence of the affection. The same writer also mentions terebene as a useful drug under similar circumstances.—*Brit. Med. Jour.*

THE USE OF DIGITALIS IN AORTIC DISEASE.

In the *British Medical Journal*, 1892, No. 1628, p. 542, Dr. Alfred G. Barrs, after a very thoughtful discussion, concludes:

1. In all cases of valvular disease the chief desideratum in regard to the heart itself is the condition of the cardiac chambers in respect to dilatation and hypertrophy.
2. That the presence of symptoms in cardiac disease always means failure of compensation.
3. That the condition described as over-hypertrophy or over-compensation does not exist.
4. That the dangers in aortic disease arise from the same cause as the dangers in mitral disease, namely, failure of the compensation—that is, failure of the ventricular muscle to overcome the ever-increasing work put upon it.
5. That if digitalis is safe and beneficial in mitral disease, it is equally so in aortic disease.

Dr. Seymour Taylor argues from clinical experience that there is little or no comparison between the action of the aortic valve and that of the mitral, and that the theories advanced in the preceding paper are not orthodox (*British Medical Journal*, (1892, No. 1631, p. 705).—*Amer. Jour. Med. Sci.*

CHLORIDE OF ETHYL.

Delmis (*Gaz. d. Hôp.*, March 31st, 1892) calls attention to the advantages of chloride of ethyl as a local anæsthetic for minor surgical operations not lasting longer than one or two minutes. The best method of applying the anæsthetic is by using the glass tubes introduced by Monnet, of Lyons. These tubes are filled with the liquid, and have a capillary opening hermetically sealed. All that is necessary is to break off the point of the tube, and direct it on the part to be made insensitive; the heat of the hand holding the tube is sufficient to vaporize the liquid.

THE TOXIC ACTION OF IRON ON THE ANIMAL ORGANISM.

Dr. I. Wojtaszek, from his experiments on animals in this direction, arrives at the conclusion that iron may act toxically only after its injection into the blood or under the skin. The toxic action is manifested by paralysis of the central nervous system, which is preceded by a temporary irritation. Death follows from asphyxia, as the result of paralysis of the respiratory centre. If iron is injected under the skin for a longer time, changes of an inflammatory character appear in the kidneys, and the author admits *per analogiam* the same changes in man. The internal administration of neutral preparations of iron occasions no symptoms of poisoning. Furthermore, the author is convinced that iron does not act upon the muscular tissues of the heart, and hæmorrhage occurring as if from its abuse, may depend, as Scherff asserts, not on greatly augmented arterial pressure, but on the return of the pressure to the normal state after the removal of the disease. Finally, the author remarks that hypodermatic injections very often occasion abscesses or inflammation of the connective tissue. He believes that the best preparations of iron are its com-

bination with the organic acids, because they are easily absorbed and do not occasion local changes in the digestive tract. For hypodermic injections he recommends ferrum pyrophosphoricum cum natrio citrico, and advises physicians to abandon the use of iron.—*Przeglad Lekarski*, Nos. 5 to 7, 1892,

THE TREATMENT OF OBSTINATE HICCOUGH.

It is doubtless perfectly true that the treatment of hiccough has not received much notice at the hands of the writers of text-books in this country. But the reason of this probably is that the symptom seldom attains to any serious proportions in this part of the world, so as to call for relief by the medical man in attendance. When, however, hiccough acquires an obstinate persistency, for the relief of which therapeutic aid is urgently needed, difficulties may be met with. A case in point is recorded in an Indian contemporary, where a retired officer, aged 76, who had been suffering from acute congestion of the liver became affected with obstinate hiccough, which set in as a most alarming and distressing symptom. Everything was tried in the way of drug treatment which could be suggested, but without avail. One day, however, some beef tea was taken, which incidentally caused the patient to vomit. For a time, in consequence of this, the hiccough was relieved; whereupon the practitioner determined to try an injection of apomorphine, and the result was that vomiting was produced, and the hiccough ceased permanently. Altogether the symptoms persisted incessantly for seventy-two hours, and caused much distress to the patient. Physostigma has been recommended as useful in these cases.—*Med. Press.*

ELECTROTHERAPEUTICS AND SUGGESTION THERAPEUTICS.

Mæbius claims that in 80 per cent. of all cases in which its action seems beneficial, this is due to its psychical, not its physical influence. Eulenberg (*Berlin. Klin. Wochenschr.*, Nos. 8 and 9, 1892) has undertaken to answer M.'s objections. In regard to the first point, that it has not been proven that electricity has a curative action upon organic paralysis, and that paralyses which improve under electricity would do so without it. Eulenberg points out that the recovery would be slower and not so complete, and asks whether the results obtained in paralyzed animals are due to suggestion. Mœbius' second and third theses are: that many functional troubles are relieved by electricity and also by suggestion, ergo: electricity acts by influencing the mind only. Eulenberg points out that these troubles are also relieved by morphine, atrophine, bromides or arsenic, and asks whether these too, act psychically, as well as massage and hydro-therapy. The fifth thesis declares that the extreme variation in action of electricity, both galvanic and faradic, can only be explained by assuming that it acts by influencing the mind of the patient. Eulenberg points out that we are dealing with vital processes and not with dead material, and that we cannot predict the action of such well-known drugs as morphine or chloral in all cases. While combating Mœbius' heresy in regard to the action of electricity, Eulenberg admits that Mœbius has done a good work in pointing out the uses and benefits of psychotherapy, and calls attention to the facts that electricity, as administered by the non-expert physician, is liable to be the failure that Mœbius has described, and that general knowledge of its therapeutic application has not kept pace with the distribution and improvement of the electric armamentarium.

TREATMENT OF NEURASTHENIA.

Dr. R. Perdigo, of Barcelona, has taken up the modern treatment of neurasthenia very thoroughly in the *Gaceta médica catalana*, November and December, 1891, numbers. In speaking of general massage, the writer believes it unless in those cases which are well nourished, because it predisposes to an exaggerated morbid excitability. In the asthenic cases, when carried out with care and prudence by skilled masseurs, good results may be expected. the circulation is improved, the nutritive processes hastened, disintegration of elements unfavorable and useless to the organism is brought about, and as results the nervous system is stimulated, the appetite is improved and the general condition of the patient is bettered. The author pays homage to American writers on this subject, and from his many references must have been a close observer of America neurology.

ATROPINE AS A HÆMOSTATIC.

Strizover (*Meditz. Obozrenië*, No. 6, 1892) reports five cases of profuse hæmorrhage (1 of metrorrhagia after early abortion, 3 flooding of obscure origin, and 1 phthisical hæmoptysis) cut short by hypodermic injections of one-sixtieth of a grain of atropine. In the abortion case—woman, aged 26,w ith aortic regurgitation—digitalis internally, cold to the cardiac region, plugging the vagina with salicylic cotton-wool, and intrauterine injections of tincture of iodine and, later on, of perchloride of iron had previouly been tried in vain. After three injections of atropine—one in the evening, another three hours later, and the third in the morning—the hæmorrhage ceased, the patient making a good recovery. A. N. Dmitrïeff (*Vratch*, No. 50, 1891) relates two cases in which atropine acted well as a hæmostatic. One was that of metrorrhagia of a fortnight's standing, the patient having been previously vainly treated by ergot internally, plugging, etc. The bleeding completely ceased after four injections of $\frac{1}{100}$-grain of atropine given twice daily. The other patient was suffering from very severe menorrhagia. Persistent internal administration of ergot and hydrastis canadensis, ice locally, etc., having failed, a syringeful of an atropine solution (0.003 gramme of the sulphate to 10.0 aq. dest.) was injected under the skin. A marked general improvement followed half an hour later. After a second dose, five hours later, the bleeding considerably lessened, and after the third and last (twelve hours subsequently) ceased altogether. Only trifling dilatation of the pupils was noticed in the patients.—*Brit. Med. Jour.*

MEDICINE.

RECOVERY FROM LOCOMOTOR ATAXIA.

Dr. Cronyn relates a case of locomotor ataxia in the second stage with cure following an attack of erysipelas of the face and head. The man continued under treatment about a year without benefit, when the attack of erysipelas set in after exposure to cold. He was violently delirious about four days. After recovery from erysipelas it was noticed he could walk without a cane. There was no ataxia. He remained well and in the hospital for three years; was exhibited to students, and has remained well since returning to work. Would ask to what the cure was due? There had been no history of syphilis, and the treatment had not been anti-syphilitic. He suggested that the erysipelas may have extended down the cord producing congestion, local extra nutrition of the sclerosed lateral column with restoration of function. Diagnosis had been confirmed by several neurologists. —*Med. Record*, Nov. 7, 1891.

ABSCESSES IN THE MEDULLA OBLONGATA.

Eisenlohr (*Deut. med. Woch.*, February 11th, 1892) first refers to the rarity of abscesses in this region as well as in the spinal cord (not of traumatic origin), whereas they are fairly frequent in the brain. The first case occurred in a man aged 43, with fœtid empyema on the left side, and fœtid expectoration. The empyema was incised, a piece of the seventh rib being removed. About three weeks later a second localized abscess in the pleural cavity, communicating with a dilated bronchus, was opened, and a piece of the fifth rib excised. Nine days later there was stiffness and weakness of the left arm, followed by total paralysis of the left side, as well as diminished sensation, and ultimately anæsthesia of the left forearm and hand. The pupils were unequal. Death was due to rapidly increasing dyspnœa. At the necropsy many bronchiectatic cavities were found in the lower lobe of the left lung. On transverse section through the medulla an abscess the size of a pea was found lying between the left olivary body and the floor of the fourth ventricle. The abscess was prolonged downwards as far as the second cervical nerve, and was situated in the posterior columns, but extended also into the gray matter. A smaller focus of round-celled infiltration was found in the right half of the medulla oblongata. The meninges were healthy. The second patient, aged 24, suffered from an attack of cerebro-spinal meningitis. After a varying course of about seven weeks he became restless. The pupils were now markedly unequal, the right being widely dilated and fixed, the left moderately dilated and sluggish. Four days later there was deep stupor and slight left facial paralysis. There were epileptiform convulsions and divergent

strabismus before death. There was no optic neuritis. Whitish gray exudation was found on the under surface of the pons and on the upper and lower surface of the cerebellum. At the level of the corpora quadrigemina and near the aqueduct, the brain substance was destroyed, and some drops of pus found. Round about there were punctiform hæmorrhages and complete softening. The cavity ended opposite the lower corpora quadrigemina. In the first case the abscess was secondary to the purulent change (bronchiectasis) in the lung. In the second case the changes in the pupils were due to the lesion near the anterior corpora quadrigemina. Abscess of the brain in connection with epidemic meningitis has been described, and especially by Strümpell; but Eisenlohr has not found any record of abscess of the cord in this disease.—*Brit. Med. Jour.*

CEREBRO-SPINAL MENINGITIS.

J. S. Nowlin (*Journ of Nerv. and Ment. Dis.*, October, 1891) maintains that the nomenclature of this affection gives rise to an incorrect view of its pathology and treatment. Almost without exception authors have written as though an inflammatory process in the meninges of the brain and cord were the original lesion to be combated. The actual cause of the disease is malarial poison, which primarily affects the nerve centers; any inflammatory action that may be present is merely concomitant or secondary. Quinine is the antidote, and is specially effective if given during the prodromal stage or as a prophylactic. Adjuvants such as calomel, in frequent and large doses, arterial and nerve sedatives, must be freely used. Nowlin furnishes clinical notes of five cases treated by him in one year. Three of the cases died, but no reference is made to any *post-mortem* examination.—*Brit. Med. Jour.*

THE FATTY SECRETIONS OF THE SKIN.

M. Arnozan has imagined (*Annales de Derm. et de Syph.*), a very ingenious method for determining the presence of fatty matters in different parts of the skin. "When small fragments of camphor are thrown into water, they are subject to rapid vibratory movements, which are immediately arrested if the point of a needle which had been rubbed amongst the hair is placed in the water; that is to say, fatty bodies arrest as if by enchantment, the movements of the camphor. If camphor does not turn round in distilled water, it may be inferred that the water contains fatty bodies, or that the walls of the vessel are oily." M. Arnozan quotes this passage from Malagutt's *Dictionary of the Medical Sciences*, and verified experimentally the fact which has been stated, insisting on great care and cleanliness as regards the water and the vessel used. The method has shown him that in a healthy adult, all the skin of the head, the upper part of the trunk—anteriorly and posteriorly—the shoulders and the pubes are covered with an oily layer, the other parts of the the skin appearing to be quite free from it. On the sternum and the shoulders it is present in very small proportions, and on these parts it is sometimes not found. With reference to recent statements which have been made regarding the functions of the sweat glands, he lay stress on the fact that fat is never present in the palms: whilst in the axillæ it was sometimes present and sometimes absent.

NARCOLEPSY IN THE INSANE.

Dr. Szczypiorski reports (*Ann Medico-Psych.*, Nov, and Dec., 1891) the case of an hereditarily degenerate lunatic, with alternate periods of excitement and depression and para-lucid intervals (when persecutory fancies and exaggerated scruples were present), who had several attacks of narcolepsy. These varied from four to thirty-five days in duration. Of the one-hundred and-twenty days he was under care, eighty-seven were consumed in these slumbers.

HICCOUGH AND COMPRESSION OF THE PHRENIC.

A novel method of combating persistent hiccough was recorded by M. Leloir at a recent meeting of the Academy of Sciences (*Lancet*). Some years back he was consulted by the parents of a little patient who was the subject for over a year before of a persistent and distressing hiccough, which recurred every minute or so, and which had resisted every plan of treatment. M. Leloir then conceived the notion of compressing the phrenic, which he

did between the sterno-clavicular attachments of the sterno-mastoid muscle. The compression was digital, and continued for three minutes, causing, however, considerable pain. As a result, the hiccough, disappeared entirely, and has not recurred. Since then he has adopted the plan in several cases of the kind, and always with complete success. The method is simple enough, and can be put in practice by anyone, and is, besides its utility, interesting as an example of the successful application of the researches of Brown-Sequard on inhibition.

HERMAPHRODISM.

The *France Médical*, October 23, 1891, gives a notice of Dr. Charles Debierre's recent work upon this subject, which has been undertaken solely for the following purpose: first, to prove that, from the anatomical point of view, the hermaphrodite is neither a monstrosity nor a freak of nature, but a creature devoid of ordinary development, that is, not developed sexually in conformity with its species. Physiologically, the hermaphrodite is a degenerate, impotent and sterile, imperfect in impulse and characteristic equilibrium, on account of unstable and perverted sex. Socially an unfortunate object, and much to be pitied, the hermaphrodite belongs to the dangerous classes, and society should be warned accordingly. Humanity is either masculine or feminine. The unhappy object of Dr. Debierre's study is neither man nor woman. Before the civil code it would be well to consider the hermaphrodite absolutely neuter, thus excluding the possibility of legal marriages in cases of doubtful sex.

BLACKENING OF THE TEETH BY ANTIPYRINE.

It is asserted that the internal use of antipyrine blackens the teeth; this peculiarity should be generally known by the profession, and also among the laity, that objections may be made on this ground to taking it as a remedy. The blackening is the more intense, the more imperfect the enamel, but may be removed by attrition with dilute acid. The considerable use of antipyrine for several years back, gives importance to this last observation. —*Southern Dental Journal.*

SURGERY.

OPERATION FOR SPASMODIC TORTICOLLIS.

Some advance appears to have been made in the surgical treatment of this most distressing affection; but until its pathology is more clearly ascertained, we cannot hope that the results of treatment will be anything like uniformly successful. One point that lies on the surface is the variations met with in different cases. In one patient the sterno-mastoid muscle may be the only one affected, in another it will not be implicated at all, and similar variations are met with in the case of the other muscles which rotate the head. It is, therefore, difficult in some cases to determine exactly what muscles are implicated and to what nerve treatment must be directed. Difficulty also arises from the depth at which some of the muscles and the nerves supplying them are placed, so that any operation on these nerves involves a very deep dissection. Nerve-stretching, even when very thoroughly carried out, has not been attended with success, and simple division of the nerves has not given better results. Surgeons are now dealing with these cases by the free excision of the nerves supplying the affected muscles, removing the nerves as near to their central ends as possible. Last year M. Petit recorded twenty-six cases in which he excised the spinal accessory nerve. Of these, in thirteen a sucessful result was obtained, seven were much improved, two were slightly better, and three enjoyed temporary benefit only, while one patient died from phlegmonous erysipelas. The operation in question is a comparatively simple measure. The more difficult cases are those in which the posterior muscles are involved. Early last year Dr. W. W. Keen recorded a case in which he had excised muscular branches of the posterior divisions of the first, second, and third cervical nerves with marked benefit, but not complete success. Soon after Dr. Noble Smith recorded a case in which he had performed the same operation on the first, second, third, and fourth cervical nerves. Dr. Powers has now related a third instance of this operation, in which he exactly followed Dr. Keen's procedure. The last two patients were greatly benefited by the operation. Dr. Keen makes a transverse incision

carried down through the complexus. Mr. Smith employed a vertical incision. The results thus obtained are well worthy of the attention of surgeons, although the treatment is only empirical.—*Lancet.*

HYPOGASTRIC NERVE SECTION AND THE BLADDER.

Dr. Lannegrace states (*Prog. Med.*, April 9, 1892) that simultaneous section of the two hypogastric, or lumbar sympathetic nerves, have no effect upon micturition. The bladder retains its responses and tonicity. Trophic changes do not result. Section of the medullary nerves always produces retention which ceases in about three days. The cause of this retention is to be found in a resistance coming on in the neck. The animals may live indefinitely, although motricity and sensibility are evidently diminished, since the animal urinates upon a higher intra-vesicular pressure than can be normally endured. The urine is normal. The bladder has vascular and trophic disorders. The veins are dilated. There are punctate and patch ecchymoses, epithelial erosions, or even superfical ulceration from which hæmaturia results. The submucous tissue is œdematous and infiltrated with round cells. The lymphoid exudation may spread to the muscular layer. The use of sounds, even when aseptic, in animals, causes the urine to become ammoniacal and sanguinolent. The bladder becomes paralyzed and profuse hemorrhages result, frequently causing death. Sub-acute cystitis often results. Section of these nerves, hence, predisposes to contamination. Simultaneous section of the lumbar and sacral nerves results in urinary retention, which lasts from three to six hours, and is due to constriction of the neck and paralysis of the walls. The same trophic lesions result as those just mentioned. One-sided section of lumbar and sacral nerves has no appreciable effect.

THE TREATMENT OF INTRA-MAMMARY ABSCESSES.

Hache (*Rev. de Chir.*, 12e annèe, No. 3) recommends the following as a means to procure the rapid healing of these abscesses:

1. After antiseptic precautions the most important procedure, as in all other abscess cavities, is the procuring of perfect drainage.

2. The compression, uniform and firm, of the gland is the best means to accomplish this end, the position or declivity of the incision being of little importance.

3. To produce this uniform and sufficient pressure concentric compression directly of the gland should be joined to the classic method of pressure against the thorax.

4. Drainage-tubes should be avoided as much as possible, as they render the compression painful and retard the healing.

5. When the abscess is superficial and only covered by a thin layer of tissue, it should be incised in this point. The thinness of the walls renders the use of drainage-tubes unnecessary. He reports four cases in which this method of treatment by compression produced rapid cures with restoration of the secretive function.—*Amer. Jour. Med. Sci.*

STATISTICS OF ELEVEN HUNDRED AND FIFTEEN OPERATIONS ON ADENOID TUMORS

Dr. Menière's (*Revue Therapeutique Medico—Chirurgicale*, December 15, 1891) lecture draws its principal interest from the great experience which he possesses on this subject. He prefers, for diagnosis, digital exploration to posterior rhinoscopy. He insists on the grievous modifications which these growths cause in the skeleton, the facial expression, the hearing, and the general condition of children who have them. The only treatment is removal, and the only instrument advised for this purpose is the cutting forceps. The operation may be done in many sittings, separated by an interval of from five to eight days, removing only one piece at a time, which is done so rapidly that children bear it well as a rule. After each operation the patient gargles with cold water, an antiseptic nasal injection is given, and the ears are closed with cotton. On the day of the operation the patient stays in one room. The average number of sittings is three, and often, at the last one, the pharyngeal wall is scratched with a rigid metallic ring, which procedure clears completely all points not reached with the forceps. Several paintings with pure tincture of iodine complete the cure. The

above method is the one always used by the writer.

The second method is to remove all at one sitting. It is necessary to give an anæsthetic. The flowing of blood is often considerable and a febrile reaction may ensue. The child should keep its bed for some time. Chloroform or any other anæsthetic not being absolutely without danger, it appears useless to employ one in "an operation so mild and exempt from real pain."

A TRAGUS RETRACTOR.

This instrument, recommended by Dr. Cresswell Baber, consists of a ring of flat metal, and the end of the band which forms the ring is bent back obliquely, and forms a blunt hook twelve millimetres in length. Fixed on the tip of the left forefinger in examining the right ear, the auricle is drawn upwards and backwards with the middle finger and thumb, and the tragus is drawn forwards by the hook of the retractor. In examining the left ear the retractor is fixed on the left ring finger. By its help the greater part of the meatus may be examined, and surgical means applied more readily than with ordinary speculum. —*Archives of Otology*, January, 1892.

THE TREATMENT OF MALIGNANT NEOPLASMS.

Krauss, in the *Memphis Journal of Medical Sciences*, for May, 1892, reports the results of a trial of von Mosetig Moorhof's treatment by pyoktanin injections for malignant growths. Two cases were treated; the first case was one of epithelioma, involving the upper half of the left orbit, with the frontal, nasal processes of superior maxillary and anterior portion of ethmoid bones at the inner wall of the orbit. The lower lid was edematous, and on the malar process there was another ulcer, independent of the upper one and involving the bone. Methyl-violet solution 1–4000 was injected, the strength being increased subsequently to 1–250. Fifteen minims to a drachm were injected at a time. The treatment lasted some months, the injections being made every third day. On one occasion a localized cellulitis followed, but had no influence on the progress of the affection. The whole treatment lasted about six months and three months later all traces of the disease were still wanting. The second case was that of an old lady with an irregular lesion two inches long on the forehead. It had existed for thirteen years. After three injections the bulk of the ulcer disappeared. This case was regarded more as lupoid in nature than epitheliomatous. The author concludes his article by saying that we are only justified in treating inoperable cases in this way.—*Univ. Med. Mag.*

OBSTETRICS.

INVESTIGATIONS IN THE HÆMOGLOBIN PERCENTAGE AND THE ESTIMATION OF THE RED BLOOD CORPUSCLES IN THE LAST PERIOD OF PREGNANCY, AND IN THE PUERPERAL STATE

Bernhard (*Münchener medizinische Wochenschrift*, March 22–29, 1892), has compared a series of blood counts of the patients in the Frauenklinik zur Erlangen, with those of healthy, unimpregnated women.

In the examination of twenty healthy non-pregnant working-women, he found an average of 4,458,000 red blood corpuscles and 80.25 per cent. hæmoglobin.

He examined thirty-two pregnant women, from under 20 to over 40 years of age, and from I to VI-paræ. The examinations were made after eight days, one day after delivery, and on leaving the institution, about ten days after labor.

Comparing these results with the average of the twenty non-pregnant women, he found eighteen cases to exceed. Of these in thirteen cases the excess was in both hæmogoblin and red corpuscles, in two cases excess only in hæmoglobin, in three cases excess in red corpuscles. Of the remaining cases the average count was 4,156,000 red corpuscles and 74.6 per cent. hemoglobin. The average of all the investigations made on the entrance of the pregnant women into the hospital was 4,545,000 red corpuscles, and 80.75 per cent. hæmoglobin.

From these he draws the following conclusions:

(1) The average in healthy non-pregnant working-women was found to be 4,458,000 red corpuscles, 80.25 per cent. hæmoglobin. The average in pregnant women 4,494,000 red corspuscles, 80.2 per cent. hæmoglobin.

(2) The percentages of the most important components experienced an increase until the end of pregnancy; in seventeen observed for a long time there was a gain of 2.5 per cent. hemoglobin and 14,000 red corpuscles.

(3) Pregnancy exerts an anemia-producing influence. In strong persons there is, on the contrary, an increase of the blood quality.

(4) With the labor the percentage of hæmoglobin and the blood count fall, principally through the loss of blood in the delivery.

(5) During the puerperal state there is an increase in the quality of the blood. The estimation on the tenth day after labor is equal to that on the day before the labor.—*Univ. Med. Mag.*

GYNECOLOGY.

ACUTE OÖPHORITIS AS A SEQUEL OF INFLUENZA.

In a recent epidemic of influenza Caraglorgiades (*Satellite*) observed a case of acute ovaritis of the left side, which occurred after influenza:—

A married woman, aged 25, neurotic, otherwise healthy, *nullipara*, with regular menstruation and pelvic organs well developed, was, on the 6th of December, 1891, seized with influenza of the nervous type. The attack, which was regular and never gave rise to any anxiety, lasted about ten days, and then convalescence began to be established. It was noted by the patient, with surprise, that her catamenial discharge, four days overdue, had failed to appear. On the next day (a fortnight after the onset of influenza), though the patient was still in bed, she was suddenly seized with rigors, which were followed by fever of a mild form (100° to 102° F.) with slight exacerbation at night. She had, at the same time, nausea, occasional vomiting, loss of appetite, and constipation; pain over the pubes and in the left iliac region on pressure, irritability of the bladder, and tenderness of the vagina. On moving the cervix uteri and passing the finger behind toward the sacro-iliac synchondrosis, severe pain was at once felt by the patient, causing her to suddenly cry out. By combined rectal and vaginal examination the slightly swollen ovary could be easily felt. Pain was produced by the extension of the left leg, and the patient could not lie on the right side on account of the intense suffering.

After a varying course, which lasted over two months, she entered into a period of convalescence. In March, for the first time, she menstruated without any pain or discomfort, and since then the catamenial discharge has appeared regularly. Soon afterward she began to gain strength and complete recovery took place.

The treatment employed was as follows: Absolute rest on the back with the hips raised, dry cupping-glasses applied over the sacrum, leeching twice repeated to the iliac region, turpentine stupes over the abdomen, occasional aperients, and calomel and Dover's powder were frequently used. Bromide of potassium combined with chloral were given, chiefly at night, to combat the insomnia and pain. Diuretics and diaphoretics, associated with hot baths, were of great service. During her entire illness the patient had careful nursing and appropriate diet.

TREATMENT OF THROMBOSIS OF THE VULVA.

Bouilly and Charpentier (*Rev. Génér. de Clin. et de Therap.*, April 20, 1892) recommend the observance of the following rules in the treatment of thrombosis of the vulva: 1. *During pregnancy*: resolvent and cold applications; interference only in case of rupture. 2. *During confinement*: a rapid termination of the labor by means of the forceps or by version; if there is hæmorrhage, the pouch formed is to be opened, removing the clots, followed by the introduction of antiseptic tampons. 3. *After delivery*: expectant treatment; but, if necessary, the thrombus is incised, and the cavity is then washed out and dressed antiseptically.

VAGINAL SECRETIONS.

The May issue of the *Archives of Gynæcology, Obstetrics and Pediatrics* contains a *résumé* of Doederlein's work on vaginal secretions, read by Dr. J. W. Williams, before the Baltimore Gynæcological Society.

Doederlein's object was to find what constituted the normal vaginal secretion, and to determine its relationship to puerperal troubles. Healthy young virgins

were selected to furnish a normal secretion, which is described as a small quantity of whitish, crumbling material of the consistency and appearance of curded milk; it contains no mucus and has an intensely acid reaction to litmus paper. Microscopic examination shows it to consist of vaginal epithelial cells and a large quantity of bacilli. The pathological secretion, on the other hand, is of yellowish or greenish-yellow color and cream-like consistency, and often contains mucus and gas bubbles; its reaction is weakly acid or neutral and sometimes alkaline. The microscope shows epithelial cells, numerous pus cells and a mixture of all kinds of micro-organisms. Among 198 pregnant women examined, 44.6 per cent. had pathological secretions.

A point of decided interest is that the large bacilli were always present in the normal and never present in the pathological secretions. This bacillus produces an acid (probably lactic acid) which causes the normal acidity of the vaginal secretion. The products of the life of this bacillus were proved to be inimical to the growth of most of the pathogenic micro-organisms. Large quantities of pus-producing organisms introduced into the vagina would completely disappear in four days. The bacillus is not pathogenic, and, therefore, sepsis can occur only by having poison germs introduced from without, and even these must be in large quantity to counteract the effect of the acid-producing bacilli of the normal secretion.

The proof of the pathogenic nature of the pathological secretion lay in the effect of injecting this secretion in rabbits—suppuration occurred in each case, and death followed in several. This secretion contains almost all kinds of micro-organisms, and in about ten per cent. of the cases streptococci were found. From these observations it is concluded that as the streptococcus is usually the cause of puerperal fever, and as this organism is found only in about ten per cent. of the cases having a pathological secretion, there is no danger of auto-infection among ninety per cent. of all woman, whether their secretions be normal or pathological; nor is there any justification in these cases for internal disinfection,

Doederlein believes that the streptococci are unable, of themselves, to invade the uterine cavity and produce infection, and holds that the only way for this accident to occur is for the germs to be carried there by manipulation and douching. A practical application of these observations is made in the lying-in-hospitals at Leipzig. Students are not allowed to examine patients until the vaginal secretions have been pronounced normal. Permission is not granted for those cases in which the secretion is pathological. Experiments were made with pathological secretions, during the course of pregnancy, to determine how best to restore the secretions to the normal standard.

Of the many agents used, Doederlein found a one per cent. solution of lactic acid the best. This appeared to produce an unfavorable medium for the growth of the pathogenic organisms, while it supplied the most desirable conditions for the development of the normal vaginal bacilli, which in turn, by their action, made the secretions unfit for harboring most of the pathogenic organisms. In many cases thus treated the pathogenic were sure to give place to the normal vaginal bacilli and the secretions change from an unhealthy to a normal condition.—*Univ. Med. Mag.*

ENDOMETRITIS IN ACUTE GENERAL DISEASES.

Massin (*Archiv für Gynäkologie*, Bd. xl., Heft 1) examined twelve uteri from fatal cases of typhoid fever, pneumonia, etc., and found acute interstitial inflammation of the walls as well as of the endometrium, with superficial hæmorrhages, the latter being most extensive in connection with continued fever. They were apparently due to venous stasis. The glands showed cloudy swelling and granular degeneration of the epithelium, with hæmorrhages into the lumen.

COCAINE IN INTRAUTERINE INJECTIONS.

Lediberder (*Rev. de Chir.*, May 10th, 1892) mitigates and even prevents the pain caused by tincture of iodine when used as an intrauterine injection, by first injecting a 1, 2, or 3 per cent. solution of cocaine. If this solution is kept in contact with the uterine mucous membrane for two or three minutes, the iodine injection causes no pain.

AN UNUSUAL FORM OF SECONDARY CARCINOMA OF THE UTERINE BODY.

Benckiser (*Zeitschrift für Geburtshülfe und Gynäkologie,* Band xxii., Heft 2) found, in a uterus removed *per vaginam* for cancer of the cervix, that the disease had extended above the os internum, the corporeal endometrium being traversed by deep furrows between which were opaque reddish nodules. On microscopial examination the epithelium was seen to be normal in the furrows, while over the nodules the epithelial cells were enlarged and contained large transparent nuclei, while the mucosa was infiltrated with round cells. A few glands still retained their epithelial lining. A small fibrous polypus at the fundus had undergone cancerous degeneration. It was evident that the secondary disease in the corpus uteri had affected only the superficial epithelium, the glands and connective tissue being healthy. The patient being fifty-nine years of age, the absence of glands might be explained as due to climacteric changes. The patient was free from recurrence two years after operation.—*Amer. Jour. Med. Sci.*

CURETTING THE UTERUS BEFORE ABDOMINAL SECTION.

W. R. Pryor (*N. Y. Journ. of Gynæc. and Obset.*, February, 1892) believes that most of the persistent discomfort following abdominal section is due to overlooked and neglected endometritis, and not to adhesions. He is further of opinion that secondary pyosalpinx taking place in tubes which have been left untouched, as apparently healthy, when the opposite appendages were removed, is likewise due to endometritis. The persistent backache, the descent and posterior displacement of the uterus so often observed, are due to the uterus remaining enlarged and heavy from endometritis. All these accidents may be avoided by a curetting preliminary to the major operation. The curette should be most thoroughly applied opposite the tubal openings, because there the endometrium is thickest and hard to reach if inflamed. The vagina should be scrubbed with soap and water and then with a 1 in 3,000 sublimate solution. The iodoform gauze may at once be made by soaking purified mull in the sublimate solution, then rinsing it out and dusting thoroughly with iodoform until the wet gauze can contain no more. Pryor never injects vinegar, iron, iodine, or other astringents into the uterus, and he never uses styptic cotton. By thus destroying the diseased endometrium before proceeding to the grave operation of removing the appendages, the operator will afford the patient the best chance of complete cure.—*Brit. Med. Jour.*

PEDIATRICS.

HERPES ZOSTER IN CHILDREN.

Comty (*Soc. Méd. de Hop. mal. de l' Enf.*, Paris, 1892, x., 31.)finds that in children the eruption is the whole of the disease. In thirty-three cases twenty-one were girls, twelve boys. Among these thirty-three four were less than two years of age, twenty-nine had passed that age. The age of ten was that at which the largest number of cases occurred. The disease showed itself more frequently in the summer months. It was rarely that the children afflicted failed to present something which might predispose them to the disease. Nervous accidents or shocks before the appearance of the herpes were particularly noted. Among the occasional causes a traumatism, which preceded by three weeks a brachial zoster, may be cited. Another time vaccination was followed after eight days by the zoster.

ENLARGEMENT OF THE SPLEEN IN YOUNG CHILDREN AS A DISTINCT DISEASE.

Carr (*Lancet*, April 23 and 30, 1892) in a rather long article treats of a splenic enlargement in children not due to the usual causes of such conditions. He looks upon it as a disease *sui generis*. He bases his views upon thirty cases observed during *three* years—sixteen males and fourteen females. The age varied from two months to two and a-half years. They were usually wasted. There was usually pallor, associated with what the author calls a characteristic splenic appearance, a waxy color with a faint olive tint. The degree of splenic enlargement varied. In all cases it could be felt one inch or more below the margin of the ribs. In half the number the lower edge was on a level with the superior spine of the ilium. The liver was apparently enlarged in half the number. In some cases a few of the

external lymphatic glands were enlarged. In four cases hæmorrhage, occurred, due apparently to the severe anæmia. In two cases there was a faint cloud of albumin. The blood was examined in fifteen cases. The red discs varied from 32 per cent. to 78 per cent. of the normal. The hemoglobin was usually from 50 to 67 per cent. The course of the case is essentially chronic. The prognosis is not necessarily bad, though the disease is of long duration. The most satisfactory treatment is with cod-liver oil and iron.—*Univ. Med. Mag.*

THE ANTISEPTIC TREATMENT OF DIPHTHERIA BY ANTIPYRINE.

This already widely used remedy is likely to occupy a still broader field, according to Dr. A. Vianna (*Comptes-rendus hebdomadaires, Sociètè de Biologie* , 1892, No. 12, p. 109). As a result of laboratory work, finding that a 2½ per cent. solution prevented the development of the diphtheritic bacillus, he concludes that in daily amount of ninety grains, by the mouth or hypodermically to thirty grains daily, with either local applications in powder or as a solution, to an ounce daily, it can be employed with brilliant results.—*Amer. Jour. Med. Sci.*

RADICAL CURE OF CONGENITAL FISTULA OF THE NECK.

Chalot (*Rev. de Chir.*, May 10th, 1892) reports the following case: A lad, aged 17, had a congenital fistula of the neck on the right side, the external orifice being situated 2½ centimetres above the right sterno-clavicular articulation. Purulent fluid escaped from the orifice, and a probe could be passed in for 11 centimetres without reaching the cavity of the pharynx. By injecting a colored fluid into the external orifice the internal opening was discovered just in front of the posterior pillar of the fauces, upon the surface of the tonsil. Chalot operated as follows: (1) The margins of the internal orifice were removed and the opening closed by sutures. (2) The lower part of the fistulous canal was exposed and removed as high as the place where it came into relation with the carotid. (3) The part of the canal near the carotid was thoroughly scraped, so that the walls might adhere together. (4) Closure of the cervical wound, except at one point near the hyoid bone, which was left open to allow drainage. Primary union of the wound followed and a complete cure resulted, the patient being again seen several months afterwards, when no sign of the fistula was visible.—*Brit. Med. Jur.*

ANAL FISSURE AND RECTAL STRICTURE OF CHILDREN.

P. Le Gendre (*Rev. prat. d'obstetriq., de pediatrie—Rev. Inter. de Bibliog. Med.*–April 25, 1892) reports the following two interesting observations: A little girl, 6 months old, after changing wet-nurses several times, was attacked by anal erythema, digestive troubles and pain during defecation. A small sub-cutaneous abscess of the anus was soon formed. The incision of the abscess did not produce any amelioration in the condition of the patient. It was afterwards discovered that she was suffering from a fissure of the anus. Dilatation of this part and cauterization of the fissure with chromic acid, were applied, followed by a cure. The other case was of a little girl also, 13 months old, who began, at the age of 4 months, to suffer from digestive troubles. Constipation was obstinate, notwithstanding the numerous curative measures that were made use of constantly. Afterwards, the child would suffer greatly at the moment of defecation. The mother then noticed that the injections would not go into the rectum. On examination, a fissure was found, and it was impossible to open the sphincter with the finger. The child, being chloroformed, was again examined, and it was then found that the impossibility of penetrating the finger was due, not to a simple spasmodic condition of the sphincter, but to a true stricture. A posterior rectotomy was then practiced by means of the thermo-cautery. The stricture measured 3 or 4 centimetres. The rectal pouch was relieved of the fæcal matters, and an iodoform tent applied. The child fully recovered.

HYGIENE.

INOCULATION OF CHANCROID.

Dr. Coignet formulates the following practical rules: The pricked point should be small and superficial, so as to avoid

as much as possible implication of the deep skin. It should be as far away from the genital region as possible. If by the day after inoculation there is not the least inflammatory areola, you can say at once that nothing will come of it. If there is a slight inflammatory zone, it is impossible to say till perhaps some days have elapsed. If, however, by the day after inoculation there is a well-formed pustule, with greatly inflamed peripheric zone, the result can be put down as positive. In this case it is useless to wait longer and the ulceration should be destroyed at once, before it has a chance to spread.—*Lyon Medical.*

PROGRESS OF CREMATION.

Cremation seems to be making steady progress. The Sanitary Council of Vienna has passed resolutions to the effect that the burning of the bodies of the dead is the safest mode of preventing the evils of earth burial. It has been decided by the Bombay Municipal Corporation to grant the request of an Englishman to be allowed to erect a crematorium for Europeans in the municipal burying ground. The Corporation has granted a plot of ground, measuring 40 feet squre, for that purpose, at a nominal rent of one rupee per annum. The condition attached is to the effect that the crematorium shall be removed at one month's notice if the Corporation so requires.—*Annals Hygiene.*

SOURCES OF SYPHILITIC INFECTION.

Dr. Rassler, in his essay for the M. D. of the University of Kiel, makes a valuable contribution to the literature of syphilitic disease. The *Archiv für Dermatologie und Syphilis* states that Dr. Rassler undertook the labor of analyzing six hundred and thirty cases of syphilis treated in the medical clinic with the object of ascertaining the number arising from extra-genital infection. He found thirty-four such cases, comprising twenty-three of the lips, one of the tongue, two of the mucous membrane of the mouth, and three of the mamma. In three instances the primary sore occurred on the genital organs without connection having taken place, and in the remaining two it was impossible to indicate the locality. The result of these investigations shows that five percent. of all cases of syphilis are due to extra-genital infection. According to other authorities, the proportion varies between one and ten per cent., except in certain parts of Russia, where the proportion is said to reach as high as eighty or ninety per cent."—*Lancet.*

THE BEST NUTRITIVE ENEMA.

Ewald, as a result of experiments, found that eggs, even though not peptonized, were to a considerable extent absorbed by the rectal mucous membrane. According to the *Mercredi Medical* for April 1st, Huber, of Zurich, has recently repeated Ewald's experiments in Prof. Eichorst's clinic, and announces that the absorption of raw eggs is greatly aided by the addition of common salt.

The salt is well borne, and causes, as a rule, no irritation of the bowel. He considers that eggs beaten up with salt, in the proportion of fifteen grains to each egg, are the best for nutritive enema. His method of procedure is as follows: Two or three eggs are taken, and thirty to forty-five grains of salt are added. They are slowly injected by means of a soft rubber tube, carried as high up the bowels as possible. Three such enemata are given daily. An hour before each enema the rectum is cleaned out by means of a large injection of warm water.—*N. Y. Med. Times.*

MEDICAL CHEMISTRY.

THE SALIVA IN DISEASE.

Jawein (*Wiener Medizin. Presse,* 1892, Nos. 15 and 16) has made a study of the saliva in various conditions of disease. He found that the quantity is increased in slight febrile affections, while the fermentative activity remains unchanged, the absolute amount of ferment produced being diminished. In severe febrile affections, the quantity of saliva is considerably diminished, but the amylolytic activity is increased. The diminution in quantity is greater than the increase in activity, so that there is an absolute diminution in activity. In more severe febrile affections, a minimum quantity is secreted, the amylolytic activity being likewise diminished,

the reduction in both being in direct ratio to the severity of the disease. After a crisis, the quantity and fermentative activity of the saliva falls below normal. In acute febrile diseases of protracted duration, the quantity is not rarely normal, the amylolytic activity, however, being subnormal. In even severe cases of pulmonary tuberculosis, neither the quantity of saliva nor its fermentative activity is diminished. A few days before death, the quantity undergoes change, the activity remaining unaltered. In chronic nephritis, the quantity of saliva is diminished, and its amylolytic activity is not rarely below normal, with attendant diminution in production of ferment. In ascites, the production of ferment is greatly diminished; especially is the quantity of saliva diminished; while the fermentative activity undergoes but little change. In protracted, debilitating affections, such as scorbutus, diabetes, Addison's disease, the production of the salivary ferment is not uncommonly diminished.—*News.*

ON THE ESTIMATION OF MILK SUGAR IN MILK.

In determining sugar of milk in the usual manner by Fehling's solution, the difficulty is encountered that the filtrate (from the coagulated milk) is usually too opaque for titration. A. H. Gill recommends (*Journ. anal. Chem.*, 1891, 652) to mix 25 Cc. of the milk with 15 Cc. of milk of alumina and 0.5 Cc. of 25 per cent. acetic acid, to stir, then to heat five to seven minutes over a water bath at 85° C., to add 100 Cc. of water, and to heat again during ten minutes in boiling water under constant stirring. The liquid is then allowed to become cold and to deposit, and the clear portion decanted through a filter into a 500 Cc. flask, the precipitate being prevented as much as possible from getting on to the filter. The operation of boiling and filtering is repeated three times, and the filtrate finally made up to 500 Cc. It is now in condition to be titrated with Fehling's solution. The "milk of alumina" is obtained by precipitating 125 Cc. of ammonia alum with ammonia at a boiling heat, washing the precipitate by decantation, and finally adding water to make the mixture of precipitate and liquid measure 1,000 Cc.

NEWS AND MISCELLANY.

AMERICAN DERMATOLOGICAL ASSOCIATION.

The sixteenth annual meeting will be held at the Pequot House, New London, Conn., September 13th, 14th and 15th, 1892. Secretary and Treasurer, G. T. Jackson, M. D., of New York.

PROF. DA COSTA DISCONTINUES TEACHING AT THE JEFFERSON MEDICAL COLLEGE.

The profession will learn with great regret that Dr. Da Costa has announced that he has decided to discontinue all teaching in connection with the Jefferson Medical College. Dr. Da Costa has for many years been one of the most brilliant teachers in that institution, and his loss must be keenly felt.

RUSH MEDICAL COLLEGE APPOINTMENTS.

Dr. Chas. Warrington Earle, formerly connected with the College of Physicians and Surgeons, has been called to the chair of Obstetrics and Diseases of Children in Rush Medical College, recently made vacant by the death of the late Prof. Knox. Dr. A. C. Cotton, who has for many years been connected with Rush Medical College as an Adjunct Professor, has been elected Clinical Prof. of Diseases of Children.

PUNISHING ADULTERATORS.

How they treated those convicted of this crime in olden times. The *Muenchener Neueste Nachrichten* says: Our jolly adulterators of food and drink have cause to congratulate themselves that the "good old times" are past, and that their little jokes in this line are no longer looked upon in so tragic a fashion as whilom in the good town of Nuremberg. In the "Annals of the City of Nuremberg" of Counsellor Balthasar Muellner, which are kept in the archives of the ancient burgh, among other very interesting documents there are certain notices of the laws for the punishment of adulterators of food, whose Draconic terrors far overstep, in bloodthirsty penalties, the sanguinary code of Kaiser Karl V. In the year 1456,

Hans, Koelbel, a citizen of Nuremburg, and Lienhard Frey, of Thalmessing, for having adulterated some saffron, were, along with their adulterated wares, "on Friday after Misericordias," burned alive at the stake, and a woman who had assisted them was buried alive on the Monday after Boniface. In Anno. 1459, Ulrich Heydenheimer, citizen of Nuremberg, having added water to the wine which he was selling, was, by special act of grace, let off with the light punishment of losing both his ears. In Anno. 1464, Margareth Wessnerin, a huckster, who was caught in giving light weight, was buried alive near the common gallows. Such punishment had at that time, perhaps, no more effect in deterring adulterations than our laws of to-day.

SO-CALLED "HYDRARGYRUM LACTATUM"

A casualty from the misuse of drugs is reported from Bay City, Michigan. Somebody blundered, and somebody else lost his life; so says the *Western Druggist.* A physician of that town fell into the habit of prescribing "hydrargyrum lactatum," meaning thereby a preparation furnished by a Chicago dealer in drugs, which is said to contain one part each of calomel and of bismuth subnitrate, and eight parts of milk sugar. This did no harm so long as the prescriptions were taken to the shops where the Chicago specialty was known. But the day came when a change in pharmacists was made by the patient. The new pharmacist ordered through his wholesale dealers a bottle of "hydrargyrum lactatum," and received a supply of Merck's "lactate of mercury." Merck's catalogue contains that item, with the price marked at $1.00 an ounce. Chemistry recognizes "hydrargyri lactas," or mercurous lactate, and although it is not often heard of in medicine, Watt's *Dictionary of Chemistry* describes its composition and properties. This preparation was dispensed three times before any injurious effects were noticed, but the fourth dispensing of it was followed by the death of the patient. An analysis of the drug is said to have shown the presence of mercuric lactate as well as of the mercurous salt, and it is suggested that a reduction had been going on in the bottle after it left the wholesaler's hands. If this is the fact, and can be proved, it will tend to lighten the condemnation launched by the *Western Druggist* against the conductors of the Chicago drug-house for its "criminally reckless terminology," in that they adopted a harmful name to cover a comparatively mild "specialty." It will also tend to lighten the feeling of responsibility for this peculiar "accident" in the mind of the physician, against whom the *Druggist* alleges that his conduct was "little less then criminal," because he prescribed a substance about which he really knew nothing. There seems to be a fatality about nearly all these "specialities or combinations made by some known-to-us-alone process;" sooner or later, they become the occasion of loss of life, or they get everybody into trouble who has anything to do with them. The remedy of known composition is not always safe, but it comports more thoroughly with the dignity of the profession to employ it, so that even if perchance a casualty should follow its legitimate use, it would not be necessary to resort to that most idiotic of excuses, "I did not know it was loaded"—the plea of those who point pistols at their best friends and kill them!—*New York Medical Journal.*

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THE
MEDICAL AND SURGICAL REPORTER.

No. 1852. PHILADELPHIA, AUGUST 27, 1892. Vol. LXVII—No. 9.

Clinical Lectures.

SURGERY OF THE GALL-PASSAGES AND LIVER.

By. DR. W. KÖRTE,
BERLIN, GERMANY.

Continued from the last issue of The Reporter.

ABSCESS OF THE LIVER.

Circumscribed suppurations of the liver are much more rarely observed in our climate than in the tropics.

With us they are most frequently caused by gall-stones and suppurations of the appendix. Metastatic pyæmic abscesses of the liver are of course not included in this category.

Thrice I have seen extensive suppurations of the liver resulting from gall-stone, while small foci of suppuration, following the gall passages in the liver, I observed in two other cases (Cases X and XIII). This last affection cannot be treated surgically, for while the larger abscesses may be opened and will heal up, if they can be found of course; this cannot be done with the smaller multiple abscesses. In the Case XI, the history of which has been given in another part of this article, the gall-stones had set up a suppuration between the gall-bladder and diaphragm, as well as in the left lobe of the liver, next to the gall-bladder. The opening of this latter abscess was undertaken from the same superficial incision used in laying bare the gall-bladder, and by means of drainage and the iodoform gauze tampon, was encouraged to heal. The second case of abscess of the liver occurred in the case of a woman (Case XV) whom I had treated for continued gall-stone colic. In this instance I sought in vain by means of repeated punctures to locate the point or points of suppuration. The autopsy revealed a large abscess in the left lobe of the liver, a similar one in the right lobe, and besides these several smaller abscesses. It is doubtful, therefore, whether a complete evacuation of the pus could have been effected in this case by any means.

In a case observed by Dr. A. Fränkel* in the Internal Department of the hospital, the possibilities offered for recovery were far more favorable. In this case, during the life of the patient, active measures were taken to locate the seat of suppuration, but in vain. The autopsy revealed one large abscess in the right lobe of the liver, which had it been found might easily have been opened and evacuated. The pus in this abscess contained a pure culture of the *bacteria coli commune*.

Abscesses of the liver may also occur after perityphlitic suppurations, either through pyæmic infection, when it has not been possible to locate or open the primary point of suppuration†—or a direct migration or continuation of the suppurative process in the retrocæcal connective tissue, up to that portion of the margin of the liver not covered by the peritoneum. In such cases the pus usually enters the subphrenic space, but occasionally penetrates directly into the liver where it sets up a circumscribed point of suppuration. Such a peculiar and rare course, I was able to trace in Case XIV. Here Dr. A. Fränkel was able to find the suspected abscess in the upper portion of the right lobe of the liver, by means of the exploring needle. After resection of a piece of the eighth rib, six or seven centimetres long, I opened into the pleural cavity and from there by puncture through the diaphragm again succeeding in finding the abscess, which I then cut into through

*See *Deutsche med. Wochenschrift*, No. 48, 1891.

†See my article on Perityphlitis in the *Berliner klin. Wochenschrift*, No. 27, 1891.

perhaps an inch of liver tissue. The hæmorrhage was quite extensive but was finally checked by compresses, and about half a pint (¼ litre) of fœtid pus was evacuated. The abscess cavity was large with irregular walls. In the pus evacuated, besides a number of other micro-organisms, the *bacteria coli commune* was found. At first I was far from entertaining any very sanguine prognosis, since I suspected the existence of other abscesses of the liver. The fear proved, most fortunately, to be unfounded, for within three months the abscess cavity had entirely healed up.

The symptoms which led to the diagnosis of abscess of the liver were as follows: High remitting fever, with chills, icterus, dry tongue, general symptoms of sepsis, and accompanying these a dull pain in the region of the liver, which was greatly increased by pressure over the affected parts. The proof was offered by the exploring needle, but frequently many punctures were necessary. In one case at the request of Dr. A. Fränkel, in a patient who had every symptom of abscess of the liver, which, however, had not been found by the exploring needle, I laid bare the liver and endeavored to find the abscess by palpation, but in vain.* At the autopsy, which was performed ten days later, I found a perityphlitic abscess deep in the small pelvis, with pylephebitis and enlargement of the liver without abscess. Both *intra vitam*, as well as *post mortem*, it could be seen that the punctures were well borne by the liver and gave rise to no reaction. Indeed the places where the needle had been introduced could not be found at all.

The *bacteria coli commune* seems to be the most frequent participator in abscess of the liver. We found it in two cases, and also once in the gall-bladder.

The treatment of abscess of the liver, from the most rational point of view, consists in incision performed at one sitting. The point of incision varies, naturally, with the location of the abscess. If one can reach the abscess from the abdominal cavity, an incision here should be preferred. Only then when the abscess is situated very high, at or near the apex of the liver should the opening be made through the pleural cavity. Puncture of liver abscesses has also been successfully performed with a thick trocar by Israel and others. In very feeble and weak subjects this method seems recommendable, since it considerably simplifies the operative procedure.

*See Dr. A. Fränkel's article in the *Deutsche Med. Wochenschrift*, 1891, No. 4.

Perityphlitis; hepatitis suppurativa; incision after resection of the eighth rib, through the pleural cavity; drainage; metastatic abscess under the gluteal muscle; recovery.

Case XIV. H. N., thirty-nine years old; driver. The patient had frequently suffered from perityphlitis, the last time during the May of 1891. After a relapse a continued septic fever followed. Pain in the region of the liver. Puncture with the exploring needle revealed deep pus in the liver.

On June 10, 1891, the patient was transferred to the surgical department of the hospital. An incision was made over the eighth rib, back of the line with the axilla, eight centimetres of the eighth rib were incised; the pleural cavity opened and immediately closed with iodoform gauze. The diaphragm bulged forward and was incised, and through the incision the smooth surface of the liver seen, and after a single exploratory puncture, and incision made two centimetres into the substance of the liver, and a large cavernous abscess cavity evacuated, and syringed out with lysol and sterilized water. Iodoform tampon and a drain was then inserted.

The patient was greatly collapsed and powerful excitants were administered. For about four weeks a high evening temperature continued. From the pleura there were no untoward symptoms. Subsequently a large metastatic abscess formed under the right gluteal muscle, which had to be opened. There was no secretion of gall. The deep wound in the liver healed gradually by granulation.

The patient was discharged on September 11, 1891, as completely cured.

He again reported on November 16, 1891 in excellent health.

Cholelithiasis; abscess of the liver; death.

Case XV. J., thirty-six years old, seamstress. The patient led a sedentary life and laced. She aborted once; in 1882 she had inflammation of the appendix.

In July, 1886, she had icterus with painful enlargement of the liver, but no colics. During September of 1886 she had a relapse. On November, 24, 1886, gall-stone colic appeared, and a similar attack occurred on Dec. 27, of the same year. During June, 1887, she had gastric catarrh and icterus. She then underwent the Karlsbad cure. On July 23, 1887, she had a severe chill followed by high fever, and great depressian. From that time a high remitting fever continued, with severe icterus. Fæces colored, dull pain in the region of the liver. The liver was enlarged. The chills returned, but no gall-stone colic.

The presence of an abscess of the liver was suspected, and repeated exploratory punctures made, but without result.

On August 20, 1887, death occurred under symptoms of increasing weakness.

The autopsy was made on the evening of the same day.

The liver was found enlarged, especially the upper portion. Its peritoneal covering was covered with fibrin and adherent to the diaphragm.

In the left lobe of the liver, close over the ensiform process of the sternum was found a large abscess reaching up to under the apex of the liver. A similar abscess was found in the apex of the right lobe, and besides these, numerous smaller abscesses were found in the course of the gall-passages in the liver. The gall-bladder was covered with adhesions, contracted and contained light yellow gall, and three cholestearin calculi. The mucous membrane of the gall-bladder was not ulcerated. The cystic and choledochus ducts were not occluded. The blood-vessels of the liver in the *porta hepatica* were free. Nothing abnormal was found about the bowels.

SUBPHRENIC ABSCESS.

Suppuration between the liver and diaphragm—subphrenic abscess—was found in five cases as resulting from perityphlitis;* once in consequence of gall-stone (Case XI), and once in consequence of an old pyelonephritis.

The diagnosis was made as follows: First, from the knowledge of a previous inflammatory disease of the abdominal cavity; second, from the existence of a remitting fever, which would point conclusively to the existence of suppuration; third, from the fixed pain in the intercostal spaces, over the liver; fourth, from the results of percussion which demonstrated the enlargement of the liver while the pleural cavity was found empty, or else containing a serous exudate; and fifth, the examination by exploratory punctures which resulted in confirming the diagnosis beyond doubt. Punctures were frequently made through the healthy pleura, without occasioning any harmful results. The muscular fibres of the diaphragm quickly closed up the puncture. In one patient the following characteristic condition was found by percussion to the right, at the back above the *spina scapulæ*, there were the usual lung resonance, but below this dullness (serous pleural exudate); then from the eighth rib downward tympanic resonance (subphrenic abscess containing gas), and below this again, the liver dullness.

For the opening of these abscesses two ways are open to the operator. Either transverse incision is made at the back, below the twelfth rib, and from there following the diaphragm the abscess opened into; or else a rib (usually the eighth) excised in a line with the axilla and from this opening through the pleural cavity, the upper apex of the diaphragm incised. As to which is the most preferable method of procedure, can only be determined by the location of the abscess. I have in four cases cut down upon the abscess from the back and below, and three times from above through the pleural cavity. The pleural walls were adherent in two cases, and in one case the free pleura was opened, and then shut off by a tampon of iodoform gauze. The pleura reacted by discharging a moderate serous exudate. Of the severe cases of subphrenic abscess operated upon, six recovered, while one patient (a woman) died. The patient had suffered for years from an open fistula in the right kidney region, and also from chronic nephritis. The opening was made from this fistula by a transverse incision under the twelfth rib, and into an abscess which extended to the apex of the diaphragm. The abscess cavity gradually healed up, but the fistula remained open, the urine contained cylindrical crystals. An attack of erysipelas starting from the

* *loc. cit.*

*See XI *loc cit.*, and cases 2, 9, 10, 11, 13, *Berliner Klin. Wochenscrift*, No. 27, 1891.

fistula, and in connection with the nephritis caused death.

The autopsy showed that the right kidney had been transformed into a mass of dense cicatrical tissue filled with small single abscess cavities, and that not a trace of the kidney substance was discernible. The subphrenic abscess had healed up. The left kidney was in a condition of chronic inflammation.

ECHINOCOCCI OF THE LIVER.

Three cases of echinococcus of the liver have come under my observation (Cases XVI to XVIII). All the patients admitted to having dogs about them, and coming constantly in contact with them. The treatment always consists in laying bare, stitching fast, and opening of the sack, at one sitting. The cysts may be absolutely shut off from the abdominal cavity, by a circular row of sutures, lying close to each other and carefully made with fine round needles. The line of sutures is then protected as in the case with the gall-bladder with a coating of collodion, and over this a wick saturated in iodoform vaseline, then the sack opened. This precautionary method was always found efficient. In one case (XVIII) the sac when operated upon was found to be suppurating. This case shows the great danger of punctures though the skin in abdominal echinococci. The exploratory puncture had only been made the day prior to the operation and yet when the abdominal cavity was opened, a large amount of a turbid fluid, containing numberless streptococci, was discharged, and from one of the punctures in the sac the putrid contents was being discharged. The sac was closely sewed into the abdominal wound and then opened and evacuated. The dreaded peritonitis did not supervene; but unfortunately this patient whose peritoneal cavity had thus withstood the inroads of the most dangerous pus-coccus, died four weeks after the operation from inflammation of the gall-passages.

The secretion of gall was in all three cases very profuse, and here, as in the cases of gall-bladder fistulæ previously referred to, I was forced to the conclusion that this great loss of gall greatly weakened the patients. The quantity secreted in Case XVIII varied from 400 to 500 grammes daily, and in case XVI was even as high as from 600 to 1100 grammes a day. This patient in spite of an otherwise good condition fell away greatly during the loss of the gallic fluid.

Syringing or washing out of the sac was not done immediately after the operation except in the case where suppuration exists. The discharged gall was odorless and not decomposed. The freshly discharged gall was of a golden-yellow color, while that which had been exposed to the air, assumed a greenish hue. Therapeutic measures adopted to check the immense secretion of gall proved futile. The following were used: injections into the sac of slightly astringent solutions, such as a five per mille solution of chloride of zinc, and a one to four per mille solution of nitrate of silver, etc.; besides these, packing of the cavity with gauze, plugging of the fistula (Israel), but all without any results. This copious discharge of gall, in an otherwise aseptic case, constituted a danger not to be underestimated. In one case, (XVIII) I illuminated the cavity with the cystoscope, but was unable to find the source of the gallic secretion.

Echinococcus of the liver; operation at one sitting; copious discharge of gall; pleuritis (tuberculous ?) during the course of healing; discharged with fistula; recovery.

Case XVI. A., twenty-three years old; laborer. Had frequently played with and petted dogs. In 1888 he first noticed a pain and swelling of the liver. During May of 1891 he was suddenly taken ill with severe pain in the region of the liver.

He was admitted on May 5, 1891 to the Internal Department of the hospital. The typical distension of the liver was present, and a semispherical, tense enlargement bulging forward to the right and close to the median line.

On May 20, 1891 the patient was operated at one sitting. The sac sewed into the abdominal wound, then incised, and a large number of echinococci evacuated. The sac in the liver had an opening about three centimetres long in its base, which led into another sac, this also contained large quantities of echinococcci. The sacs were washed out with lysol and sterilized water, and a drain inserted,

A most copious secretion of gall followed, 600 to 1190 grammes in twenty-four hours.

In June the cavities were washed out

with a 5 per mille chloride of zinc solution, and with Lugol's iodine solution and others.

In July the secretion became less. The patient recovered strength rapidly and was able to walk about.

On August 6, the fistula only discharged slightly, and the general condition of the patient was good.

On August 26, the patient caught cold and sickened with a left serous pleuritis, accompanied with high fever. The secretion of gall became more copious. This illness lasted until September, and then the temperature gradually fell, and suspicious symptoms pointing to the presence of tuberculosis were present (catarrh at the end of the lung.

The patient was discharged by his own request, with the fistula still open, on October 5.

During the early part of the following January, he reported in excellent health.

Echinococcus permagnus hepatis; operation at one sitting; recovery.

Case XVII. G., engraver, twenty-six years old. In his youth he had suffered from an inflammation of the hip-joint, and still retained a suppurating fistula at the hip. A year and a quarter ago the physician first noticed that his liver was enlarged. For three months back the swelling had rapidly increased in size, and caused the patient many difficulties. Two years previously the patient had owned a dog that had been with him constantly. The patient looks pale and limps on account of an ankylosis of the left hip. The entire right side of the abdomen is enormously enlarged by a fluctuating tumor, reaching from the edge of the ribs to the *spina ilei*, and from the axillary line to a hands-breadth beyond the median line. On percussion the enlargement had a dull sound, and in several places the growth felt like a hydatid. The upper border of the liver dullness was at the fourth rib. Heart and lungs are sound. Urine moderately albuminous but containing no cylinders. Slight œdema of the scrotum and dorsal surface of the feet.

On October 17, 1891, the single operation was performed.

A transverse incision was made at the margin of the ribs, eleven centimetres long. The cyst then sewed to the abdominal wound and opened. A large quantity of yellow fluid was evacuated, as well a large "Mother" echinococcus egg and several smaller ones. The cavity was then washed out with sterilized water.

The course of the healing was without any reaction. A passing but severe discharge of gall occurred which affected the patient profoundly. The wound is now entirely healed, save for a small fistula.

At the end of December, 1891, the patient was discharged cured

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Extensive echinococcus of the liver; single operation; improvement; death four weeks later from suppuration of the gall-passages; peritonitis healed.

Case XVIII. S., woman thirty-two years old. The patient fell ill during the latter part of December, 1890, with pains in the region of the liver, chills and icterus. During the early part of February, the abdomen became enlarged. The patient had had a dog to which she was much attached, and which she had carefully cared for.

She was admitted to the hospital on February 16, 1891. The patient then had severe icterus, and a high fever. The liver enlarged to the navel, and fluctuated at this point. Exploratory puncture on February 17, revealed pus with bacteria.

On February 18, 1891, laparotomy was performed. The liver was found covered with fibrin, and from the abdominal cavity a turbid, serous fluid, the color of gall, was discharged in which numerous streptococci were found by the microscope. From the opening in the sac made by the exploring needle, there exuded a putrid fluid. The sac was then stitched fast to the abdominal wound. The incision allowed the evacuation of three litres (quarts) of a putrid gallic fluid, a broken-down "mother" echinococcus and countless smaller ones. The cavity was washed out with a salicylic boric solution, and strips of iodoform gauze inserted. The dreaded peritonitis, rendered so imminent by the introduction of streptococci into the abdominal cavity, did not occur. At first the patient began to recover, in spite of a slight rise of temperature in the evening. The discharge of gall was most profuse amounting to 400 or even 500 grammes a day. The icterus did not entirely disappear. On March 12, a chill occured, and the fever increased. The patient died on March 18.

Autopsy: On the serosa of the abdominal cavity there were only thin, mucus-like threads of adhesions, but no fresh peritonitis. The echinococcus cavity in the right lobe of the liver was greatly shrunken. It was found to communicate with the gall-passages. In the liver multiple abscesses following the courses of the gall-passages were found.

TRAUMATISMS OF THE LIVER.

Only two cases of gun-shot wound of the liver have come to my notice. The one patient (Case XXI) had been shot through the *flex. coli sinistra*, stomach, and right lobe of the liver, and was brought in for treatment sixteen hours after the shooting. The opening of the abdominal cavity revealed the presence of a most intense, diffuse peritonitis which precluded all possibility of a recovery. The injury to the liver itself had not been attended by any hæmorrhage of moment. Indeed, it sank into insignificance in the face of the severe injuries to the intestinal canal, and received no treatment whatever.

In the second case, the bullet had passed through the left lobe of the liver, and had buried itself in the gastro-hepatic ligament. The symptoms of internal hæmorrhage—increasing paleness, small rapid pulse, vomiting, and pain in the abdomen—pointed to the necessity of an immediate operation. From the point of the bullet's entrance into the liver, there was a moderate hœmorrhage. This was easily controlled. On the other hand, there was a very serious hæmorrhage from the upper surface, and from the gastro-hepatic ligament. As it was impossible to sufficiently lay bare the points of hæmorrhage, a form of iodoform gauze tampon was used with good results.

Hæmorrhage constitutes a great danger in all wounds of the liver. In all operative injuries to the liver a profuse hæmorrhage is usually seen—"it bleeds as though from a cavernous angioma," says Burckhardt. Usually, however, compression continued for a time suffices to check the hæmorrhage, similarly as in the case with kidneys. In iodoform gauze we possess a material admirably effective as a tampon, and strips of the gauze may be left in place without doing any harm whatever, and the surrounding parts still being kept aseptic. The strips of gauze, if allowed to protrude from the wound, act as drains as well, and materially assist in the formation of rapid adhesions and quick healing in the abdominal cavity. For those hæmorrhages of the liver that cannot be checked by transfixion, closing by suture, or by the cautery, the iodoform gauze tampon is the final resort. Burckhardt has not failed to call attention to this fact, in his articles on this subject.

In a third case of shot-wound of the epigastrium, I opened the abdominal cavity on account of symptoms of internal hæmorrhage. The bullet, however, had penetrated between the liver and diaphragm without occasioning any great hæmorrhage. In this case laparotomy was really unnecessary, since the symptoms which pointed towards internal hæmorrhage, were undoubtedly due to shock alone. The abdominal wound healed uneventfully. All the same I would in future, in similar cases, proceed as actively as in the above, if there was any suspicion of internal hæmorrhage. The opening of the abdominal cavity—especially in hospitals where every aseptic precaution can be rigidly adhered to—is an operation which can be confidently undertaken, without jeopardizing the patient's life, while an unchecked hæmorrhage into the abdominal cavity will occasion the most threatening dangers.

Once, in a case of crush of the lower part of the thorax, where on the second day peritonitis set in, laparotomy was performed. The diagnosis of traumatic peritonitis had already been made, and it was known that some abdominal organ must have been crushed. The presence of blood in the urine, naturally led me to think of rupture of the bladder, although the urine was voided naturally. It was not until the abdomen had been opened and the gallic consistency of the exudate recognized, and fragments of the liver substance found between the loops of the intestines that the real nature of the injury was determined upon. This was confirmed further at the autopsy.

Such cases reach to limits of our surgical possibilities. Should this case have been diagnosed early enough, and had the injury not been too extensive—in the case mentioned it was not a complete crush, but a T- shaped laceration—then it might well be imagined that an opening of the abdomen with the application of the iodoform gauze tampon, might not only check the

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hæmorrhage but, prevent the spread of inflammation.

As in every branch of surgery, so also of the liver, the greatest points of importance are the determination of the exact diagnosis, and the indications for operation. The technique and execution of the planned operation are matters of secondary consideration.

Gun-shot wound through the liver, diaphragm; laparotomy; recovery.

Case XIX. S., twenty-five years old. August 4, 1890, the patient shot himself with a revolver in the abdomen, close under the ensiform process of the sternum. The pain was moderate. Pulse small and quick; no vomiting. The patient's face was pale, and his extremities cool. On account of the symptoms of internal hæmorrhage, laparotomy was performed on the evening of the same day (August 4th), the abdomen being opened from the ensiform process 10 centimetres downward. The bullet was found to have penetrated between the liver and the diaphragm; there was no hæmorrhage. The abdominal wound was closed without the bullet having been found.

The patient made a good recovery.

Gunshot wound in the left lobe of the liver and omentum minus; laparotomy; recovery.

Case XX. G., thirty-one years old. The patient shot himself two hours before admission, on October 22, 1892. He complained of severe pain, and vomited, but no blood; the upper part of the abdomen painful on pressure. Pulse small and rapid. Close under the ensiform process of the sternum was a small bullet hole with a black margin. On account of another operation being in progress at the time the patient was forced to wait two hours longer. The vomiting continued but contained no blood, and owing to increased symptoms of collapse laparotomy was performed, by 10 centimetres long, downward from the ensiform process. The liver being exposed a round opening with torn, and irregular borders, was seen in the left lobe of the organ. There was considerable hæmorrhage, which two transfixion stutures sufficed to check. Under the liver there was a larger hæmorrhage, and after lifting the edge of the liver up everal large clots came away, and under this fresh blood made its appearance. The stomach was drawn forward and a slight injury was found on it, but aside from this a large amount of blood flowed from the gastro-hepatic ligament. Two transfixion sutures were inserted but this only checked the hæmorrhage in a measure. A firm iodoform gauze tampon was then inserted, and an end of the gauze strip allowed to protrude from the abdominal wound, at its upper angle. The rest of the wound was then closed. A firm compress bandage was then applied and a sand-bag laid on the abdomen. A subcutaneous injection of camphor was given, as well as opium per rectum.

On October 23, the day after the operation, the patient was still vomiting a great deal, and the pulse rapid. The dressings were soaked with blood, and the compress therefore changed.

On October, the vomiting ceased, and the abdomen became soft, gases were passed per anus.

On October 26, the iodoform gauze was removed without causing any bleeding. A small drain was inserted. The general condition of the patient was good.

On October 30, the drainage tube was shortened, and the wound was closing.

On November 12, the wound was entirely and firmly healed.

On November 16, 1891, the patient discharged as perfectly cured.

Gunshot wound of the colon, stomach and liver; peritonitis; laparotomy; death from collapse.

Case XXI. D., thirty-four years old. The patient was a strongly built laboring man, who was shot with a revolver at a distance of about twenty paces. The shot entered the left side of the abdomen. and immediately caused profound symptoms of collapse. The shooting occured between ten and eleven o'clock in the evening. The bullet was cut out by the physician from close under the arch of the rib. The patient was then brought to the hospital in a wagon, the journey lasting six hours, starting the next morning

The patient arrived at the hospital about noon, July 24, 1891. He was greatly collapsed, had cold extremities, and a scarcely perceptible pulse. The abdomen was very painful but not distended. Below the left border of the ribs, in the axillary line, was the shot-wound. and under

the border of the right ribs, between the axillary and mammillary line was the incised wound through which the bullet had been removed. Out of the latter, a serous, turbid fluid was discharged. The patient vomited frequently. Hypodermic injections of camphor were given, and the patient anæsthetized with ether. The abdominal incision made, reached from the ensiform process to the navel. The abdominal cavity contained a putrid, serous fluid, smelling of the contents of the stomach, the intestinal loops were covered with a layer of pus. In the stomach near the great curvature there was a torn wound three centimetres long, which was sewed up. In the decending colon there were two wounds, from which fæces exuded; these were also sewed up. The right lobe of the liver was also shot through. There was but little blood in the abdominal cavity. Death occured from collapse at half-past two on the afternoon of the same day.

The case being one for the coroner, a judicial autopsy was performed.

Fracture of the fifth, sixth, and seventh ribs of the right side; rupture of the liver, and of the kidney; peritonitis; laparotomy; death.

Case XXII. Z., twenty-four years old. The patient was a robust man, who was run over on June 4, 1891. The fifth, sixth, and seventh ribs on the right side were fractured. There was emphysema of the skin, and moderate pain in the body, accompanied by frequent vomiting. An ice-bag was applied and opium administered.

On June 5, the abdomen was more distended and painful. The urine was of a light color, and voided spontaneously.

On June 6, the symptoms of peritonitis increased. The urine became red in color, and microscopically was found to contain red blood corpuscles.

A diagnosis of traumatic peritonitis was made, occasioned by injury to an abdominal organ—possibly either intestine or bladder, and on June sixth laparotomy in the median line, from the navel to the symphysis, was performed. About one liter of an almost black, yet fluid, blood was evacuated. The intestinal serosa was covered with a dark green coating. An examination of the bowel revealed no injury, and the bladder was intact. Between the intestinal folds there was a green fluid evidently containing gall, or small fragments of the liver. The abdominal cavity was drained and the wound closed. Death occurred during the evening of the day of the operation.

Autopsy: Fractures of the fifth, sixth and seventh ribs, an injury to the pleura, a T- shaped rupture of the liver, and a tear of the right kidney, were found. The intestine and bladder were intact.

FRUIT EATING.

The value of fruit of various kinds in the dietary of the average healthy individual cannot well be over estimated. When it causes indigestion it is usually because it is taken at wrong times, and not because it is necessarily difficult of digestion. The proper time to partake of fruit, whether cooked or raw, is at meals, and not, as is so frequently done, at odd times throughout the day. At this season of the year most persons are the better for restricting the amount of nitrogenous food and indulging in raw fruit and green vegetables. It must not be lost sight of that fresh uncooked fruit and vegetables ought to form a substantial part of our daily food. Cooking, though it may facilitate the digestion of fruit, does so at the expense of the peculiar quality of freshness the absence of which in the long run, gives rise to serious disturbances of nutrition. A belief has gained ground of late years, based on a misconception of certain general statements, that fruit is harmful to persons with a tendency to gout. No doubt if cooked and sweetened by the addition of cane sugar, dyspeptic disturbances are not unlikely to occur, but no possible drawback attaches to the use of raw fruit in proper quantities and provided that it is ripe. The salts contained in fruit are of the greatest value to the organism, aud are not obtainable in anything like the amount required from any other source. Children particularly should be encouraged to partake of fruit as part and parcel of their meals, and if proper care be exercised in the selection of a ripe and undamaged article, and in the giving of it at suitable periods, no disturbances of the intestinal functions need be apprehended. In conclusion, it is a generally-accepted maxim that fruit and alcohol do not go well together.—*Med. Press.*

Communications.

A CASE OF KELOID OF THE MALE URETHRA.*

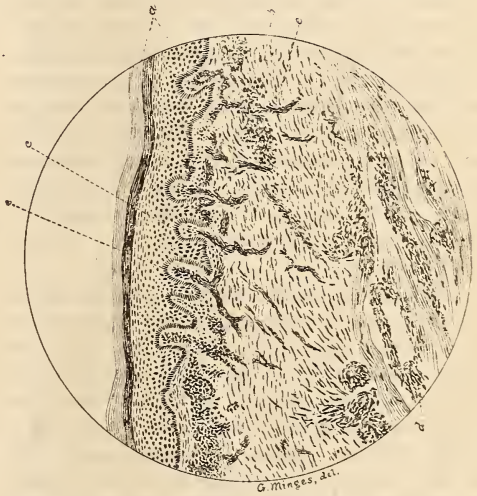
By GEORGE MINGES, M. D.

Keloid is a comparatively rare disease under all circumstances, but as an affection of mucous membranes it has been hitherto altogether unknown, at least as far as Dr. Mc Carthy and myself have been able to ascertain from a careful search of the standard works on skin-diseases and surgery, and from personal correspondence with several well-known dermatologists. Hence the request of this Society to describe this case for publication. Dr. Mc Carthy, being at present occupied by other very important matters, has kindly turned over his notes to me to allow of the completion of this paper in time for the meeting.

S. D———, aet, 33 years; Jew, married. Habits unexceptionable. Family history perfect. No venereal or other previous disease. Consulted Dr. J. S. Lewis, May 25th, 1890, on account of pain in the head of the penis and frequent micturition while on his feet, these symptoms being absent when lying down. Dr. Lewis thinks the patient had been to several irregular physicians before coming to him. Careful urinalysis and exploration of the bladder with a steel bougie of moderate size failed to reveal anything abnormal. Inability to pass a full stream became superadded during the following summer and the patient consulted an "irregular" who introduced medicated bougies which apparently aggravated the symptoms.

Soon after this, patient for the first time consulted Dr. J. F. McCarthy. The symptoms above described were now more urgent, but still absent in the recumbent position, and besides there was a feeling of weakness in the pelvis and lower extremities. Exploration of the urethra showed the presence of a stricture at the meatus, ¾ inch long, and allowing the passage of a No. 8 American (12 French) sound. An application of electrolysis alleviated the pain for three days and allowed the passage of a sound three or four sizes larger. Six or seven more seances of electrolysis were less successful and internal urethrotomy was substituted, allowing the passage of No. 20 American (25 French) sound, with which patient faithfully kept the stricture dilated. The cut healed by the formation of a dense, non-elastic tissue, without inflammation or suppuration.

Within four or five months after the urethrotomy the symptoms had again become so severe that Dr. McCarthy removed with the knife under cocaine the whole dense cicatrix. In two months the neoplasm had returned to its former extent, and Dr. McCarthy, now suspecting the growth to be of an epitheliomatous nature, sent the patient to me for a microscopical examination. I found a slight degree of epispadias, the result of the excision,



through which could be seen and felt a dense nodular mass involving the wall of the urethra, from which a smooth, unyielding scar seemed to extend almost around the whole circumference of the canal. A small piece was snipped out of the nodular portion with curved scissors and sections examined under the microscope, but as the subjacent tissues had not been included, a definite diagnosis could not be made at that time.

About six weeks later (Sept. 19th, 1891) a more radical operation was done by Dr. McCarthy, the urethra being split up for a distance of 2½ inches and turned out, and all of the neoplasm and a still larger portion of healthy tissue excised and given to me for microscopic examination. The new growth was hard and nodular and did

*Read at the annual June meeting of the Dubuque Medical Society, June 18, 1892.

not differ much in color from the surrounding urethra. After hardening in absolute alcohol and imbedding in celloidin, sections were made with a microtome perpendicular to the surface and stained with hæmatoxyline and eosine, and gave the picture shown in the cut.

The surface of the verrucose tumor is everywhere covered by a thick layer of tesselated squamous epithelium except in a few small places where it seems to have been mechanically removed by the manipulation resorted to while preparing the specimen. The rete mucosum (I will here designate the different layers of the mucous membrane by the names generally given to the corresponding strata of the external skin) is also apparently normal in every way, likewise the papillæ of the corium. The remainder of the corium consists of bundles of closely-packed fibres and spindle-cells, running parallel to the surface, traversed by numerous capillaries infiltrated with intensely stained round and spindle cells. The larger cells are likewise surrounded by aggregations of newly-formed cells. Roundish collections of young cells are also found in the corium independent of the blood-vessels.

The history of the results, of the several operations, leading to speedy recurrence and greater size of the neoplasm, together with the uniform direction of the new-formed tissue, parallel to the surface, the strict limitation of the fibrous hyperplasia to the corium without destruction of any of the normal elements of the mucous membrane, and the infiltration of the adventitia of the blood vessels, determined the diagnosis of keloid, in spite of the fact that that disease has been heretofore described as exclusively an affection of the skin, because no reason was apparent why it might not attack a mucous membrane, and especially that of the fossa-navicularis, which histologically differs so little from the integument. In accordance with that diagnosis the prognosis was made unfavorable as regards recurrence, because every excision, by increasing the size of the scar, must be followed by a corresponding enlargement of the neoplasm.

The prognosis was soon verified, for in two months patient was worse than ever. Dr. McCarthy now advised amputation of the penis, but this was not accepted. Mr. D— now passed into the hands of another physician who in time excised the growth still more extensively.

Dec. 16th, 1891, six weeks after the last operation, patient called upon Dr. McCarthy, and the scar-tissue was again returning and causing considerable pain.

March 10th, 1892, patient wrote from Grand Rapids, Mich., saying that he was still in the same condition, and that he could stand very little walking, as the irritation made his penis very sore.

THE ÆTIOLOGY OF PRIMARY CROUP.

In a recent work, F. Egidi and L. Concetti (*Archivio Italiano di Pediatria*, 1892–*Rev. Inter. de Bibliog. Méd.*, April 25, 1892) appear to have established an identity in the nature of primary croup and diphtheria. It seems that the dual theory of the disorders referred to, has made great progress in Italy, and that the majority of practitioners admit that croup is not as contagious as diphtheria. The authors show, from their studies, that we must go back to the original conception of Bretonneau and of Trousseau, and consider the two affections as two different localizations of the same disorder: diphtheria. Egidi puts forth the clinical reasons that sustain this theory. In a recent epidemic of croup observed in Rome, the patients, after being operated upon for tracheotomy or intubation, would succumb in the course of two or three days, with symptoms of adynamia. Concetti made cultures from the false membranes of such patients, and found the bacillus of Klebs-Löeffler. The cultures were inoculated into animals, causing in them all the symptoms of diphtheria. Upon 16 clinical patients suffering from primary croup, bacteriological examination revealed, in 14 of them, the bacillus just mentioned. This latter author, Concetti, then affirms that in the cases observed by him, the primary croup was of a diphtheritic nature in the proportion of 87.5 per cent. The negative results observed in the other two cases are explained by a defective maneuvre. Concetti describes minutely the process of cultivating the bacillus for examining and inoculating purposes. He further insists upon the fact that in from 24 to 48 hours, bacteriological examination constitutes an exact test in a doubtful case of croup.

A CASE OF TRAUMATIC ABSCESS OF LIVER AND PERINEPHRITIC SPACE, DISCHARGING THROUGH LUNG AND URINARY TRACT.

By JAY MUSSINA BRYAN, M. D.,
FOUNTAIN SPRINGS, PA.

Edward C—, aged 38, miner in the employ of the Lehigh Company, residing at Tamaqua, Pa., a moderate drinker, a steady worker, previously healthy. While driving a chute on May 7th was struck on the back by a fall of coal, forced about five yards down to the main chute, the coal sliding off during the fall. He was helped out and after a few minutes walked home, paying very little attention to his hurt at the time.

He kept at work for two weeks though troubled greatly with his side. A swelling in the right renal region then made its appearance and C—, was compelled to stop work and see a doctor. This individual put a large plaster on his back, encouraged him to get around as much as possible and go to work, even hinting that nothing was wrong with him. Under this treatment C—, worked three days and was compelled to go to bed. The doctor, finally persuaded that something was wrong, examined the swelling and informed the patient that he suspected "gravel in the kidney." At the expiration of a month, alarmed at his rapid loss of weight and strength, C—, discharged him and came to the State Hospital.

On admission June 7th the patient had the appearance of a dying man, his face almost bloodless, expression anxious, body drawn slightly to one side. In the right renal region was a rounded swelling, firm on pressure, too deep to be well circumscribed, in which fluctuation could not be detected. He had a severe cough attended with copious expectoration, but microscopic examinations of sputa showed no bacilli or elastic fibres, but few epithelial cells; consisting, indeed, of almost pure creamy pus and a little coal dust. On close questioning it was noted that the cough, while it was continuous for some time was but the anthracotic cough common to the miners of this region, until, sometime after his hurt, it suddenly became much worse and the expectoration greatly increased in amount. About the same time his urine became "milky" as he expressed it, and he felt much relieved for a few days. Microscopic examinations of the urine also showed pus, with no tube casts. Vague hectic symptoms were noted for three days and a conservative operation decided upon.

Operation.—On June 10th the patient was put on the table, a few whiffs of ether given and a small tenotome passed deep into the lumbar muscles over the swelling with a negative result. An incision was then made and the surgeon's finger was then forced through the muscular covering into the abscess cavity from which about thirty ounces of thick, ropy pus exuded. Digital exploration showed the under surface of the right lobe of the liver excavated as far as the finger could reach, the kidney much displaced but evidently intact and the whole perinephritic space distended beyond the reach of the operator's finger. The whole cavity was thoroughly irrigated with $\frac{1}{4000}$ warm bichloride solution and peroxide of hydrogen, a drainage tube inserted and the wound dressed antiseptically. The hectic symptoms ceased and the patient became much easier at once. The opening discharged pus freely for a week, necessitating a frequent change of dressings and irrigation. The discharge slowly lessened in amount, the tube being removed a week ago. The patient has never had an untoward symptom, the temperature never reaching 100° after the operation. He has gained greatly in strength and weight, the urine is free from pus and the cough all but gone. The case was complicated throughout by hæmorrhoids, but with returning health this condition has decidedly improved.

CREASOTE SYRUP FOR THE SODA FOUNTAIN.

Creasote is now prescribed so frequently for so many affections of the stomach and lungs that a Vienna pharmacist serves it from his fountain and has numerous customers for it. The following, according to the *Ztschrft. d. allg. Oest. Apot. Verein*, is the formula for the syrup:

℞

Creasote	1 part.
Cognac brandy	50 parts.
Simple syrup	300 parts.
Tincture of peppermint	2 parts.

Mix.

REPORT OF A CASE OF STENOSIS AT THE AORTIC ORIFICE; HISTORY, DIAGNOSIS AND TREATMENT.*

By DR. E. B. BORLAND.

This case is reported for your consideration and comment, on account of its being one of the rarer forms of organic change in the valve orifices of the heart, its murmur being frequently confounded with functional murmurs at the base, and its treatment being based on indications differing from the routine treatment of the other valve orifices or valve lesions.

Mrs. M., aged 63. Family history good, except some tendency to rheumatism in some of the other members of the family. She gives some history of chronic bronchitis in early life. Was married at the age of 46. Her first and only child was born after a difficult labor. General health good for the last 40 years preceding the present trouble, which began about two years ago, when she first noticed some shortness of breath on exertion and a little later on a short cough troubled her on rising in the morning. At intervals she complained of some uneasiness and pain in the region of the heart, and had frequent attacks of fainting. About one year ago she came under my observation with the following symptoms: Appetite poor, tongue moist, intensely red and deeply fissured. Tenderness over the stomach and some irregularity of the bowels. General appearance of anæmia and emaciation. Radial pulse so weak and compressible that it could only be counted with difficulty. Examination of the chest revealed the usual signs of chronic bronchitis. The impulse of the heart against the chest wall was not perceptible, and the position of the apex beat could not be determined by palpation on account of the feeble systole. The first sound of the heart, as heard over the mitral area, was very feeble, shorter than normal and absent in about one systole in twelve. The second sound, as listened to over the base, was preceded by a low pitched systolic murmur. The veins were more prominent than normal but no signs of dropsy. During last summer she suffered from the usual number of "fainting spells," followed by general prostration lasting for several hours to several days. These attacks were evidently excited by unusual physical exertion or chill. During their continuance the heart's action was weakened, the cough increased, cyanosis deepened and the tendency to syncope on rising much greater than usual. These attacks were treated with small doses of morphine or alcoholic stimulants. Digitalis was tried several times cautiously in small doses, but had to be discontinued on account of its increasing the dyspnœa and cyanosis, causing signs of pulmonary congestion and making the heart more irregular. Several preparations of iron were given to correct the general anæmia but were not well borne by the stomach. Teaspoonful doses of emulsion of cod liver oil given just before meals gradually improved her appetite and strength. The attacks of heart exhaustion became less frequent and less severe. In the early part of the winter she had an attack of acute bronchitis with a moderate rise of temperature, which yielded to the usual remedies. No other rise of temperature was noted; it being usually subnormal. Her condition at present is as follows: Tongue still red and fissured, digestion improved, urine normal in color and quantity, specific gravity 1022. No albumen nor sugar, reaction decidedly acid, precipitate containing an excess of lime salts. The radial pulse is tardy, small and beats about sixty to the minute, but is noticeably stronger than it was a year ago. The percussion wave of its tracing has a low amplitude, the ascent is more gradual, the apex more rounded and the descent more gradual than normal. No dicrotic waves can be detected with the finger, and there is no visible pulsations in any of the larger arteries. The pulse intermits when the cardiac sounds are absent. The temperature in the afternoon is about 97.5° F.

The physical signs of bronchitis have almost disappeared, but the respirations are still about 28 per minute. The cough is absent except on rising in the morning.

The area of percussion dullness cannot positively be determined on account of the mammary gland. There is no impulse in the fifth intercostal space either on inspection or palpation. The apex probably strikes the sixth rib. The first sound, as

*Read before the Allegheny County Medical Society June 21, 1892.

listened to over the mitral area, is shorter, higher in pitch, and has lost its booming quality. Over the aortic area, during systole, a harsh murmur is heard which is transmitted to the subclavian and cartotid arteries. No sound is audible over the aortic area at the time of the opening of the semilunar valves, but over the pulmonary valve area the closing of the semilunar valves of the right heart can be distinctly heard.

The clinical history of this case is one of atheroma of the aortic orifice, coronary arteries, and probably, to some extent, of all the larger arteries, with infiltration of lime salts, particularly around the aortic orifice. The age of the patient is in favor of atheromatous changes. After the aortic valves are closed there is no sign of a regurgitant murmur. This is evidence that the free edges of these valves approximate, and that there are no vegetations on their ventricular surfaces. The murmur heard over the aortic area during the passage only of the blood from the left ventricle to the aorta, is evidence of narrowing of the orifice or thickening of the bases of the valves so that they cannot be pressed into the sinuses of Valsalva, or both. The imperfect nutrition of the heart is shown by its feeble systole, intermittent pulse and lack of complete compensatory hypertrophy. These are signs that the openings into the coronary arteries are either obstructed or these vessels are in a condition of sclerosis.

The irregular intermittent action of the heart is not a necessary factor of simple aortic stenosis but is considered characteristic of diseased coronary arteries.

The aortic direct murmur is more likely to be mistaken for functional murmurs than any other abnormal sound. The latter is most frequently heard over the base during systole, and the anæmia and emaciation in this case would seem to favor the functional murmur. In simple anæmia murmurs the frequency and force of the heart's action increases during mental excitement or physical exertion; or, in other words, there is a marked temporary palpitation. In this case the heart's action is weakened and not noticeably increased in frequency under similar conditions. The pulse of anæmia is not only more frequent but is large and soft. In its tracing the percussion wave has a higher amplitude; the ascent is steeper; the apex pointed and the descent rapid. While the general health of this patient has improved and the other valves can be heard closing more distinctly than a year ago, the murmur has increased in intensity and pitch instead of diminishing. Functional murmurs are heard over the pulmonary as well as over the aortic areas but do not replace the normal sounds.

The use of digitalis was not permissible in this case on account of its main action being the stimulation of the cardiac inhibitory center, nerve, nerve endings and ganglia; thus slowing the heart still more by increasing the length of the diastole which robs the brain of sufficient blood during the intervals between the systoles to maintain consciousness and vital action. Further, digitalis markedly stimulates the vaso-motor nerve apparatus and contracts particularly the arterioles and delivery vessels, thus increasing the obstruction in front of the weakened, badly nourished left ventricle.

The treatment of the periods of heart exhaustion was based on two indications: Stimulation of the cardiac motor and accelerator nerves and ganglia, and removing as far as possible the obstruction to the outflow of the blood into the peripheral circulation. Morphine in small repeated doses (gr. $\frac{1}{16}$ to $\frac{1}{8}$) evidently increases the force and frequency of the heart by stimulating the cardiac motor and accelerator nerve apparatus. It relieves obstruction in front of the heart by relaxing the voluntary muscular system and dilating the vessels of the skin. Its action in congesting the brain relieves the tendency to syncope. It also depresses the respiratory center, and slows respiration which seemed beneficial in this case on account of the disproportion between the respiratory movements and the pulse beats. Alcohol, in small repeated doses, stimulates first reflexly and later directly the cardiac motor and accelerator nerve apparatus which increases the frequency and power of the heart's action. It also depresses the vaso-motor ganglia and center, thus dilating the peripheral vessels, causing the blood to flow more rapidly through them, and thus supplying the brain with sufficient blood.

In the general treatment, cod liver oil was given to increase the nutrition of the heart muscle. (For discussion see Society Reports.)

THE MEDICATION OF THE FUTURE.*

By ADOLPH KOENIG, M. D.,

The title of the paper I am about to submit is, I fear, of too great a scope to be allowed to stand qualification, for I do not presume to cast a therapeutic horoscope that shall lay bare the possibilities of scientific medication for all time to come. With the isolation of the chemical decomposition products of pathogenic bacteria and the induction of immunity against attacks of like germs, there is promise of a therapeutic revolution of the most sanguine in this age of wonderful progress. Standing on the threshold of this new field, I desire to limit myself to the time that shall elapse before the realization of the hopes generated by the labors of the bacteriologists in the physiological laboratory. The application of remedies in the general therapeutic proceedings now in vogue, is susceptible of much greater perfection, and until the knowledge concerning the life history of the pathogenic germs becomes better established, and all their manifestations made clear to the human understanding our attempts to preserve the lives of our fellow creatures, must be based on the present, more or less empiric lines of treatment. My remarks, therefore, should be considered as having reference in the main, to the present methods of medication, some of which, especially those directed toward the relief of functional disorders, will doubtless be resorted to, and exert their beneficial influence till such disorders, under the reign of perfect hygenic, social, political, and general economic conditions, shall cease to afflict the human family to the extent now prevailing.

A retrospective glance over the history of the application of medicine reveals wonderful progress within the last two hundred years, or perhaps the progress might more appropriately be limited to the present century, dating from the time that the isolation of the active ingredients of the drugs, derived from the vegetable kingdom, has made it possible to study their action from a physiological standpoint. Another powerful factor contributing to the progress in medication has been the disassociation of supernatural power from the effect of medicines. In the dark ages of religious domination, the little medical knowledge extant was found among the members of the priesthood, and it is thus not to be wondered at that they invoked the aid of, and attributed some of the effects of medicines to the influence of supernatural intervention. When it was finally discovered that the beneficial results could be traced to some special ingredient of the drug exhibited, independently of supernatural power, progress assumed rapid strides.

Allow me to substantiate this assertion by offering a few quotations from the Pharmacopœia Londinensis, written by Nicholas Culpeper, and published in the comparatively recent times of 1653. Under "A Premonitory Epistle to the Reader," he says; "God Himself, the only First-being, the Maker and Disposer of all things, Governs the Celestial World by the Intellectual, namely the Angels; He governs the Elementary World, and all Elementary Bodies, by the Celestial World, namely, the Stars; and that's the reason the influence of the Stars reacheth not to the Mind or Rational part of Man, because it is an Epitomy of the Intellectual World, which is a superior to them; but because there is is now some Dispute about it (I should have said Cavelling), by such as would fain have their own Knaveries hidden, and therefore they would fain have the Stars made to stop bottles, or else for the Angels to play at bowls with when they had nothing else to do, but not rule the Elementary world, no, by no means. We shall prove that they rule over the Elementary world, first by Scriptures, secondly by Reason.

"First, by Scriptures: I beseech you read in the first place, Genesis 1, 14, 15, 16, 17, 18, verses, * * * * To this place also answers that in the 136 Psalm. He made the Sun to *rule* by day, and the Moon and Stars to *rule* by night. In these Scriptures God saith He made them to Rule, He set them for Signs, therefore they must signifie something, He set them also for Seasons, for Daies, and for Years; the Scriptures are so clear, they need no Exposition."

Then the author says: "But let us see what Reason saith to the business." Reason he declares proves, among other things, that "both Sun and Moon make use of the other five Planets, (even as the Heart

*Read before the Allegheny County Medical Society, June 16, 1892.

and Brain make use of the Liver, Spleen, Gall, &c., in the Body of Man) for the effecting and varying things below, and tempering them diverse waies according to their several motions, else the things generated in the Elementary World would be of one Nature and Quality, and then the world could not subsist; for Man having all qualities in him, cannot subsist without any one of them. He, and he only, is a Physician that knows which of these qualities offends, by which of the Celestial Bodies it is caused, and how safely and speedily to remedy it; all the rest that practice Physick are but Mountebanks, for there is no question to be made, but that all Diseases have their original from super-aboundance or deficiency of Heat, Coldness, Dryness or Moisture; and that the Elements barely from themselves can cause this, is an opinion more fitting for a Hog-herd than a Phylosopher."

This and much more he says, "is evident to the experience of them that search after it." With such belief in the influence of the celestial bodies we may safely expect nothing short of the miraculous from the administration of his remedies, and in illustration of this a single quotation will suffice; it is as follows: "Burdock, temporarily dry, etc. Also *Mizaldus* saith that a leaf applied to the top of the head of a woman draws the matrix upwards. but applied to the feet it draws downwards, and is, therefore, an admirable remedy for suffocations, precipitations and dislocations of the matrix, if a wise man have but the using of it."

The transition from such blind practices to the administration of medicines for their physiological or germicidal action was necessarily a gradual one, and even at the present time among the ignorant, the old-time beliefs are not frequently encountered. Indeed many of them imagine that he who treats their ailments on scientific principles, and makes no claims but what he can prove by facts, which unfortunately, however, they can often not understand, is deficient in knowledge and ability to cope with disease. The charlatan who takes advantage of his patient's ignorance in making a diagnosis of typhoid fever where the honest physician declares his inability to immediately decide between that disease and some obscure temporary gastric or hepatic derangement, and then claims to have "checked" the fever when nature has repaired the damage, receives more credit than he who always tells the truth—at least for a season.

Then again look at the prodigal sons who deserted their father's house to prey on the ignorant, by clothing their remedies with so dynamically subtle and forsooth, even spiritual powers, that their elder brothers, with less keen perceptive powers, are unable to appreciate their modus operandi. Doubtless when knowledge shall be more widely diffused, and the true value of dynamic and spiritual attributes of medicines recognized by the people, and the prodigals reduced to a diet of husks, they will return to the fold where their brothers have continued to aid nature by natural means.

The empirical use of medicines generally rests on some well-marked action which the substance induces; and it is a source of great wonder to note how crude substances of very different origin, but possessing identical, or closely-related ingredients, have been used with the same end in view by different peoples.

The desire for a stimulant to the mental faculties is an attribute normal to all the members of the human race, be they high or low in the scale of development. This craving, it was discovered, in the case of the Chinese and Japanese, is satisfied by the use of an infusion of the leaves of Camellia Thea; by the Arabians by the use of a similar preparation of the seeds of Caffea arabica. The seeds of Cola acuminata served the same purpose for certain barbaric tribes of tropical Africa; in lower South America the leaves of Ilex paraguayensis enter into a stimulant beverage used by the aborigines, called mate; on the banks of the Orinoco a tribe of Guaranos make a paste from the seeds of Paullinia sorbilis, called Guarana, which is the base of another stimulating beverage; finally, even our native Indians may be cited as an example. In some of the Southern States they were known to make a decoction of the leaves of Ilex Cassine, a species of holly, called "black drink," which was drunk during the performance of ceremonial dances.

The wonderful part of these customs only becomes evident after the chemists inform us that the active ingredient of each of the substances named is caffeine, or else an alkaloid having an almost identical chemical formula.

In the same manner numerous antispasmodics may be shown to depend for their popular reputation on valerianic acid; in this category belong viburnum, sumbul, lupulin and valeriana.

The favor with which mineral products and synthetic chemicals have in recent years been accepted, undoubtedly rests on their definite composition, and the use of the old galenical preparations has decreased because they are diametrically indefinite in active constituents. The time will, doubtless, soon come when the physician who administers active drugs, not in the form of their active constituent, or in the form of assayed preparations, will be held equally culpable with the surgeon of the present time who would be so negligent as to use an aseptic solution of bichloride of mercury or other germicide, without assuring himself of the percentage strength of the active material. Isolation of all valuable constituents of crude drugs, wherever the present chemical knowledge admits of such preparation, must, therefore, precede accurate dosage, and under the wise patronage of the English and French governments, where research in this direction is fostered, much may be hoped for from numerous investigations now occupying the attention of European chemists. With active ingredients we may always expect definite results; never have I failed to cure a case of true malarial fever with a salt of quinine, and my experience ranges from the deadly Chagres to the common forms of quotidian and tertian fever. Who has ever failed to obtain the typical anodyne effects of the best crude opium from morphine, and who has not been disappointed in laudanum? Not only does morphine represent the anodyne, hypnotic, antispasmodic, and other valuable properties of opium, but the antagonistic action of such alkaloids as thebaine and narcotine is eliminated. Who has ever failed to recognize the excito-motor effects of large doses of chemically pure strychnine? In this connection I might refer to a thesis submitted by a member of the recent graduating class of the Pittsburgh College of Pharmacy on tincture of nux vomica. Out of ten specimens bought at random from as many sources only one conformed to the pharmacopœial requirement in percentage of solid extract, and the yield of alkaloids was equally variable. Defective preparation and variability in the crude drug, probably both contributed toward this result.

Modern investigation and discoveries have widened the field of medicine to such an extent that division of labor is an absolute necessity, and the most needful specialty is that of pharmacy—the preparation and dispensing of medicines. Unfortunately this specialty is far from being perfect, but nevertheless it possesses, even in its present condition, many advantages over the new idea, or more properly the old one, that physicians should apply medicines without the intervention of a skilled pharmacist. This resurrection of the ancient methods of administering medicines may be traced partly to the blandishments of the gentlemen who preach "elegant pharmacy," so that the consumption of medicines may assume the form of a luxurious habit, and the revenues of the manufacturer proportionately increased, and partly to the delusion that the regular practitioner must compete with the homœopaths, as if competition in any form entered at all into the work of the conscientious physician. No one conversant with the training and skill needful for the proper performance of the work of the pharmacist in assaying, testing, preparing, and dispensing of medicines will fail to recognize the unfitness of the practitioner of medicine to do this work. This view is evidently taken by the State, for everyone desiring to engage in this work must submit evidence of fitness, while the wholesale manufacturer prepares and furnishes to the physician, tablets, triturates, without government supervision, and furthermore, these preparations are generally so combined as to render them less susceptible to the usual tests for purity of the active constituents. For a physician to carry and dispense his own medicines is manifestly improper; it is improper because he cannot carry in stock all he needs, especially when it is remembered that many drugs must be used soon after being prepared, because of rapid deterioration, and to use complex tablets where the dose to be exhibited in the disease for which they are intended, is fixed by the wholesaler without reference to the individual requirements, is, to use a mild expression, unscientific. Besides, what physician in active practice could furnish his patients with the various officinal acids, alcohols, spirits, volatile and fixed oils, not to men-

tion the numerous other preparations requiring frequent renewal, or presenting difficulties in manipulation?

The demands of scientific medication, in my opinion, warrant the following summarized conclusions:

1st. All medicines should be prepared and dispensed by chemically skilled, licensed pharmacists.

2d. All mineral products should be in absolute purity, and all drugs of vegetable origin, with marked medicinal action, should be exhausted of their active constituents, and these administered in either their isolated condition or in assayed solutions or triturations.

3d. Pharmacopœial requirements and tests for the purity of drugs should receive legal support, and in the case of perishable substances there should be a period, fixed by law, after such drugs should no longer be dispensed.

4th. Any drug possessing marked medicinal action, offered for sale by a pharmacist, should be subject to examination by government chemists, and adulteration or other defective conditons render the vender amenable to the law, as partly contemplated by the provisions of the Paddock Pure Food and Drug Bill.

5th. To protect the public from unscrupulous and designing practitioners physicians should be prohibited by law as is the case in certain European countries, from dispensing medicines, except in cases of emergency and in localities remote from medicinal supplies.

6th. Substances possessing curative properties should be free and unprotected by letters patent, trade mark, or proprietorship; on the other hand the government should foster investigations and reward discoveries of valuable curative drugs.

(For discussion see Society Reports.)

A DEPILATORY POWDER.

According to the *Bulletin of Pharmacy* for February, 1892, the following is a useful depilatory powder:

℞ Sulphide of barium.....50 parts.
Starch.
Oxide of zinc, of each.....25 parts.

This is mixed with water so as to form a soft paste and spread upon the face. In ten minutes' time it is scraped off and the skin is now found to be smooth.

Society Reports.

ALLEGHENY COUNTY MEDICAL SOCIETY.

Scientific Meeting, June 21st, 1892.

D. C. Huffman, M. D., Vice President, in the Chair.

Dr. E. B. Borland read a paper on "Stenosis of the Aortic Orifice" etc. (See page 332.)

DISCUSSION.

Dr. Lange: The case reported by Dr. Borland is very interesting, inasmuch as it is reported as a case of pure aortic stenosis, which condition is exceedingly rare. Stenosis alone is an exceedingly rare form of the disease, so exceedingly rare that when met with, the physician is at a considerable loss as to the advisability of the usual remedies for loss of compensation, which, however, from the report in Dr. Borland's case, did not exist. This patient, if I understand the description of the case correctly, was, and for many years has been, an anæmic. The patient never gave any indication of rheumatism, one of the most common causes of valvular disease, and it is no evidence, although she came from a rheumatic family, that she had it. The fact that this patient could not take digitalis is interesting, for when a patient has loss of compensation and can not take digitalis, then the prognosis is extremely bad. Of course we have our little list, digitalis, strophanus, caffeine and convallaria, but in spite of this list, which might be increased by remedies which are not on my tongue, when a patient cannot take digitalis, then the prognosis is extremely bad.

There are two classes of patients who cannot take it, and the case reported by Dr. Borland to one of these classes properly belongs. The patients who cannot take it are those who have aortic insufficiency with the large, jumping, bounding pulse of insufficiency; the patient cannot take digitalis, but when we do give it, such a patient requires particularly close attention. The other class of patients who cannot take it are those whom it nauseates, and if persisted in it would throw them into colic. In the case reported by Dr. Borland, the symptoms did not indicate the administration of digitalis. There

was no loss of compensation. It is stated she had some shortness of breath. That is probably always present in such patients, even where dropsy has disappeared. Shortness of breath is a common thing with patients before the appearance of dropsy.

Dr. W. C. Shaw: In some cases of examination for life insurance I have noticed where the party has had no history of rheumatism at the time of examination, on questioning his parents at home he was found to have had rheumatism when an infant, and that often accounts for the fact of valvular lesions without a history of rheumatism. Rheumatism in infants occurs oftener, I believe, than is recognized. I have in my mind now an agent for the insurance company who had valvular disease of the heart, and never supposed he had rheumatism, until after some years, when he had been rejected once or twice, his mother told him he had had rheumatism when an infant.

Dr. Borland: Dr. Lange must have misunderstood my report of the case in regard to compensation. There were signs of loss of compensation when I examined the case first, and at the present time there are slight signs; also a number of signs of dilatation are present at this time. The doctor also spoke of not using digitalis in aortic insufficiency, though it was indicated in aortic stenosis. My experience in aortic insufficiency has been that it will bear digitalis better than the obstruction of the aortic orifice. Rapid pulse with low tension is, as I understand it, an indication for the use of digitalis.

Dr. Adolph Kœnig then presented a paper entitled "The Medication of the Future." (See page 334.)

DISCUSSION.

Dr. Buchanan: I agree with most of what Dr. Kœnig has said, but with regard to the fifth article of his summary, I wish to enter my protest. I would be very sorry to see the day when the medical profession was prevented from carrying their own hypodermic tablets. I would be excluded from doing so, as I understand it, by the gentleman's article. I will extend my objections to morphia for administration by the mouth. I will extend it to every drug that a physician finds necessary or desirable to carry. I believe that the physician has exactly the same chance to get a good and reliable preparation as the retail pharmacist has, and I see no reason why a middle man should come between. I do not dispense my own medicines simply because I do not find it convenient, I would feel I was very much injured if the Government or State stepped in and debarred me from that purpose. I believe that a large number of very good practitioners carry their own medicines and dispense them with satisfaction to themselves and with advantage to their patients and when we can get morphia and strychnine, and dozens of other remedies which we daily use, put up in compact and reliable form in measured doses, easily dispensed, when a man's practice is of such a nature that it is convenient for him to dispense them, I think it is the right and safe thing for him to do. It is a little more trouble very likely, but for a certain kind of practitioner it is the right thing to do. I think Dr. Kœnig is mistaken in his article upon that point.

Dr. Batten: Dr. Holmes stated that if all drugs, with but a very few exceptions were cast into the ocean, it would be bad for the fish, but good for humanity. I believe Dr. Holmes was right to say what he said from the manner in which drugs are dispensed and given to the public. The druggists talk medicine over the counters. The doctor talks medicine at the bedside and the ladies understand pretty near as much medicine as the doctors do, and consequently they are constantly dosing themselves in medicines and to their own hurt. I believe there ought to be some means taken by which the lady could be prevented from taking medicine, except when prescribed by a competent physician. There has not been very much progress made in the way of medication for the last fifty years. It is true that the physicians of fifty years ago prescribed better than they knew, yet we know at the present time that they prescribed certain medicines and that we prescribe the very same medicnes in the same diseases that they did fifty years ago. There has been some increase in the drugs, but the number of drugs that are used now will not very much more benefit the patient in certain cases than those used fifty years ago. For instance, take mercury. We use mercury at the present time in all germ diseases. They used it fifty years ago. We use the drugs now because we

know they are germicides, they used mercury fifty years ago because they knew these drugs benefited their patients. I think the doctor is right when he says that the only place to write a prescription is at the bedside, and I have no doubt physicians who carry their own drugs often cheat the patients out of drugs, but when we prescribe at the bedside and write our prescriptions there we have written a prescription which we believe will benefit our patient and we do not get into a routine kind of treatment. I believe in progressive medicine, but I believe that preventive medicine will finally outstrip curative medicine or curative drugs, and I believe the time will come when our country is inhabited by twice as many millions of people as it is at the present time, malarial fever no doubt will be rooted out, the poison will be gotten rid of and we will have no malarial fever and as our young people are educated at our common schools and institutions of learning to study and know the value of preventing disease, the more these diseases will decrease and the better they will know how to take care of their systems and bodies and less medication will be needed.

Dr. Davis: I want to say as far as I understood the Doctor's paper, there are a great many good points in it. The first part of the paper seemed to recount to us the unfortunate ignorance of the past and all seemed to glory in the fact that chemistry had come to the aid for better pharmaceutical preparations. The last part of this paper seemed to throw this all away by saying the physician had no right to use for his own benefit the very things that would come in, but that he must relegate this to second-hand parties. I do not quite see the logic of his paper therefore, what the first part had to do with the last. The way Dr. Kœnig rejoiced that chemistry had come to our aid and succeeded in bringing many of the drugs of the past to us, put in the physician's hands in a plain and simple form, medicines easy of administration, rapid and certain of action. This being the case, I do not see why that physician should be called upon to go to somebody else to administer his medicine for him which has already been prepared by the chemist. As the alkaloids are so very much better, which he illustrated, and as strychnine can be administered in divided doses by a doctor as well as anybody else, I do not see the logic of his paper. If the paper had started the other way, had asserted that all of these complicated formulas of the past were the formulas that ought to be used in our medicine now, then I could see the logic of his paper, as the preparations are so complex and compound, it is neccessary to have somebody else to compound them for us. Practically I think every physician will be guided entirely by what he finds will be the most convenient for him and the best for his patient. He will be wedded to no theory, no scheme, except what he finds answers his purpose in curing those that are afflicted and he will not strive after any better scheme, but fully and frankly use what seems the best in itself. Indeed there are very many cases we are called to see which need almost instantaneous relief. Take for instance cholera morbus. I care not whether it is next door to a doctor. You find a patient suffering from cramps. By the time you write out a prescription for a little bit of morphia, ring up the druggist, and get him to analyze it to see that it is fresh, by that time I think the patient would really wish you had some of the drug with you to administer on the spur of the moment and get relief. I know the doctor excepted emergencies, but I do not know of any case of sickness which is not an emergency. It is always an emergency and the sooner they have the remedies the better, and the sooner the doctor sees they have the remedies the better. You send to a drug store, they do not have the remedy on hand, and you have to send to another. Even where the patient is not in pain you have often lost valuable time. I believe drug stores have their legitimate place, their proper place, but unfortunately for the status of medicine to-day, the drug store has drifted from the position it ought to have. The drug store of to-day is the dispenser of patent medicines, and all in this city, with possibly one exception, dispense all the nostrums that are advertised broad and and wide in the land. That seems to be their avocation. They certainly assert that it is the source of their main profit. I am certain that anything that would lead them out of this practice would be better for the general health of the community. Now the other point that Dr. Batten made in regard to the remark of Dr. Holmes,

has the same logical conclusion. If the physician does not write out a prescription he can carry with him the medicine that will take its place. In my days I was brought up to prepare all my preceptor's medicine. Everything he prescribed was prepared in the office, and I think it was one of the best advantages to me. I first practiced in Dayton. When I went there, there was not a physician who did not prepare his own medicines, and had them in his own office. They went to the retail drug stores, bought and paid for them and dispensed simply for the convenience of their patients, and it was in the city not the country. Now, the reason why so many in the city got out of the habit of using their own medicine, was the inconvenience of it, the length of time it took. For instance, if you wanted to prescribe quinine, you had to sit down and had to measure out so much Peruvian bark and put it in. It takes time and you could count out one or two dozen pills more rapidly than you could write a prescription. You would know how fresh they were and the exact weight, you could have all that thoroughly yourself, whereas you send a prescription, it goes to the drug store; you do not know how long they have them on hand; you do not know what grade they are, whether sugar or gelatine coated. They fill your prescription. If you write for two grains of quinine, the law requires that they shall give two grains of quinine, not Park, Davis & Co., or any other, and they fill it as they want to. This subject is full of interest. I practically think it comes down to this. Each one will in the future use exactly what they find is the most convenient and gives them the best results. If it is more convenient to write prescriptions they will write them, if it is more convenient and they get better results, they will carry their medicine with them. I do not think the time will come when they will carry all medicines. There is a legitimate field for the druggist and as long as he remains in that field, I think he will have the hearty co-operation of the physicians to sustain him.

Dr. W. C. Shaw: In using the prescriptions I feel more independent. Then I have my prescriptions written and sent to a druggist, just as the doctor says, on the very day. Then I have fresh drugs prepared with reference to the patient's age and other conditions, and am not tied down to a single tablet or to a single combination or any combination, and I think there is more freedom in the prescription than in the other. I have had a few tablets brought in for temporary use in the office, but I have not been able to serve my patients with them yet, I never have had the same freedom in prescribing, and I do not think I could dispense my medicines and have the same effect.

Dr. Kœnig in closing the discussion said: Drs. Buchanan and Davis, apparently, have applied a too restricted sense to my statement, "except in case of emergency." I have no objections against any one carrying morphine or other necessary substances for bedside administration, but I do object to the idea that a good physician can be a good pharmacist. The field of medicine is two wide for one individual to give personal attention to the necessary details in all the departments. Who would seek the advice of an oculist in an obscure gynecological case? Dr. Davis has certainly strengthened my position by his reference to the good old time when his preceptor dispensed all his remedies, but found it necessary to press into service his student, who, unless very different from other old-time office students, was utterly destitute of pharmaceutical knowledge. One of the weak points in medical education is, that pharmacy is not taught in medical colleges. Were medical students given an insight of the needful knowledge required for the proper preparations of remedies, they would hesitate, as physicians, to assume the responsibilities of pharmaceutical manipulation, just as in the case of chemical analysis. When a physician prescribes quinine pills, ready made, he cannot well assure himself whether or not the bulk of the alkaloid is true quinine or the inferior cinchonine or cinchonidine, but when he calls for the separate active principle he may require of the pharmacist tests for the purity of the drugs before he incorporates them in the pill or dispenses them in any form. Dr. Davis declared that every case of sickness is a case of emergency: If that is true, then Dr. Davis should never leave his office in response to a sick call without a supply of cod liver oil and whiskey, for is it not likely that he may be asked to the bedside of an emergency case of consumption?

The information gained from a messenger is often misleading and when the dispensing physician arrives at the bedside, equipped for what he expected to find and then discoveres the true condition, he will be sorely tempted to give the next best thing. It is not *convenient* to return home for the proper remedy, so he gives what he hopes will probably do almost as well as what he would have given had he relied on his pencil to procure the best remedy known to science and best suited in every respect to the demands of the case. I stated in my paper that the present condition of pharmacy was not an ideal one; that is evident to every one. Nor is the present practice of medicine satisfactory. We can point to many members of our profession who are not ornamental, and until human nature in general becomes somewhat remodeled or the government assumes control, we need expect these conditions.

The fault, however, is not all on the side of the pharmacist. Let us accept the fact that pharmacy is a legitimate specialty of medicine. Let us accord to pharmacists what is their due and let us *demand* of them that they confine themselves within the true limits of their specialty. The witty and jocular saying of Dr. Holmes about casting all medicines into the sea, quoted by Dr. Batten, requires no serious answer.

TREATMENT OF POISONING BY COCAINE.

Eloy gives the following directions for the treatment of acute poisoning by cocaine. The patient is placed in a horizontal position in order to prevent syncope, and his face bathed in cold water. If convulsions come on cold should be applied. If asphyxia is present flagellation, massage and artificial respiration are resorted to, and if the respiration depends upon the tetanic contraction of the respiratory muscles inhalations of chloroform are employed. For the intense pallor it is well to give inhalations of nitrite of amyl. Should these means be insufficient, it may be well to administer strong coffee or caffeine, or if swallowing is impossible, hypodermic injections of ether. The entire object of the treatment is to moderate the reflex excitability of the nervous system, to sustain the heart, and to re-establish the equilibrium of the circulation.

Selected Formulæ.

FORMULA FOR THE ADMINISTRATION OF OIL OF TURPENTINE.

Prof. H. C. Wood calls attention, in the *Therapeutic Gazette*, to the powers of glycerin in disguising the taste of turpentine, and gives the following formula:

℞ Olei terebinthinæ.....fl. ʒij.
Glycerin.....fl. ʒj.
Mucil. acaciæ.....fl. ʒiss.
Aquæ menthæ piperitæ.....q. s. ad. ʒviij.—M.
Sig.—Tablespoonful every four hours during the day. Shake well.

TREATMENT OF ATROPHIC NASAL CATARRH.

Flatan (*Weiner medizinische Wochenschrift*, No. 8, 1892), describes his treatment of the above affection in the following manner: The larger masses of secretion are loosened by means of a dull or small pointed sound, and then removed by forceps. The nose is then sprayed with a ten or fifteen per cent. solution of peroxide of hydrogen, and the small loosened waves either blown out or taken out with forceps. The nasal cavity is then plugged with ten per cent. iodol gauze, which has been passed through a mixture of vaseline, lanoline and paraffine. He covers the gauze with an ointment made as follows:

℞ Sozoiodol of zinc..... 10 grammes.
Vaseline.
Lanoline.....āā 400 grammes.
The treatment should be practiced daily from four to six weeks.

—*Univ. Med. Mag.*

A RESOLVENT GLYCEROLE.

L'Union Médicale for December 24, 1891, recommends the following prescription as an application to be placed over strumous glands at the same time that cod-liver oil is taken internally with a tonic and stimulant treatment:

℞ Iodoform.....gr. xxx.
Balsam of Peru.....ʒss.
Glycerin.....ʒvi.

SOLUTION OF MORPHINE.

A solution of morphine, 1 : 30, may be kept in the following solution for months without change (*Deutsche Med. Zeitung*, No. 29, 1892):

℞ Hydrochlorate of potash.....gm. 1.
Spirits of wine.....gms. 5.
Glycerine.....gms. 10.
Distilled water.....gms. 15.

INHALATION IN WHOOPING COUGH.

℞ Thymolis.....gr. xx.
Acid carbolicis.
Ol. sassafragis.
Ol. eucalyptus.
Picis liquidæ.
Ol. terebinthinæ.....āā f ʒij.
Ætheris.....f ʒiv.
Alcoholis, q. s. ad.....f ʒiij.
M. Sig.—Put about 30 drops upon a pad of such size as to be conveniently hung around the child's neck, renewing the application every two or three hours.

In severe cases the inhalation treatment is supplemented by the internal administration of:

℞ Acid carbolic.....gr. iij.
Sodii bromid.....gr. lx.
Tinct. belladonnæ.....gtt. xx.
Glycerinæ.....f ʒiij.
Aquæ, q. s.....f ʒij.
M. Sig.—f ʒij occasionally for a child 3 or 4 years of age.

—*Jour. Amer. Med. Assn.*

TRUSS DUSTING POWDER.

De Garmo, according to the *Annals of Hygiene*, recommends highly the following, not only for use with trusses, but wherever a toilet powder is used for children:

℞ Powdered starch.....ʒiv.
Powdered talc.....ʒij.
Dried alum.....
Powdered boric acid.....} āā ʒij.
Carbolic acid.....
Oil of lemon.....} āā ʒss.—M.

PASTA CERATA.

This is the name, according to the *Chemist and Druggist*, of a new ointment basis lately introduced in Germany. The paste is made by heating 3 ounces of yellow wax with a solution of 54 grains of caustic potash in 5 ounces of water. The wax is first melted, and the alkaline solution added, stirring well until a uniform mass is obtained. The potash is just sufficient to saponify the cerotinic acid, and the soap formed emulsifies the rest of the wax. The mixture is allowed to stand for two days, then it is passed through an ointment mill. whereby it acquires the requisite smoothness. Dr. M. Radziejewski, a leading Berlin eye specialist, prescribes a marvelous eye salve, made by a leading Berlin apotheker, which has the pasta cerata as a basis, and is said to consist of the following:

℞ Hydrargyri oxidi rubri..... 1 part.
Zinci oxidi..... 2 parts.
Camphoræ..... 0.5 parts.
Acidi aseptinici..... 2 parts.
Cocainæ hydrochloratis..... 2 parts.
Pastæ ceratæ ad.....100 parts.—M.

HÆMORRHOIDS.

℞ Atropinæ sulphat..... .....gr. iv.
Acid. tannic.....gr. vj.
Morphinæ sulphat.....gr. vj.
Cocainæ hydrochlorat..... .. gr. xxx.
Vaselin.....ʒj. M.
Fiat unguentum.
Sig.—Apply a small quantity to the hemorrhoid after each stool.

—*Rev. de Thér. Gén.*

SWELLINGS ABOVE THE CLAVICLE IN EXOPHTHALMIC GOITRE.

In his *Studies of Old Case-books*, Sir James Paget refers to a few cases he has seen where a swelling occupies the supraclavicular fossa on one or both sides. He looks upon this swelling as a localized myxœdema, but it has sometimes been regarded as a fatty tumor. Paget's cases were all in adult women, many of whom were neurotic, and suffered aching pains in the affected parts. In some of them the tumor diminished in size after a time, and remained permanently less; but a striking feature in all was the way in which they became "puffed up," and then contracted again as the pain increased and diminished at frequent intervals.

Arthur Maude, writing in a recent number of the *Practitioner* on "Œdema in Graves' Disease," describes an unusual form which he terms "transitory," inasmuch as it may last only a few hours. The dropsy takes the form of a puffy swelling of the face, neck, upper limbs, or both limbs of one side, the favorite localities, however, being the cheeks and eyelids. There may be no goitre and no exophthalmos, though the rapid pulse, tremors, and other neurotic phenomena may be present. In connection with the same disease, Rendu describes an œdematous swelling which he has met with in both supraclavicular fossæ in several cases, and he remarks that it seems to occur chiefly in neurotic women, and to depend on a disordered innervation of the cervical region. Potain has called attention to this phenomenon at a much earlier date. It is just possible that some of Paget's cases may have belonged to the same category as those last referred to, and that the relatively slight character of the general symptoms may have led the patients to consult a surgeon on account of the swellings in the neck, though these were really part of a more general malady which usually falls to be dealt with by the physician.

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Leading Articles.

COCAINE AND ITS DANGERS.

The frequent reports of alarming symptoms or death from cocaine warrants our again calling attention to the dangerous character of this drug.

At a recent meeeting of the French Surgical Society of Paris, a discussion was opened regarding the *pros* and *cons* of cocaine either as a local anæsthetic or otherwise. Special attention was given to a consideration of what minimal hypodermic doses had produced toxic symptoms, and in connection with this the possible dangers incurred by even small doses.

Quite a number of the members were able to give results of their personal experience, and many interesting data were thus obtained. For the benefit of our readers we quote the following, deeming them of special practical interest.

Ruénu had used cocaine as an anæsthetic in all of 67 minor operations, including principally the excision of epitheliomæ of the lips, circumcision, hydrocele, etc. He injected from 3 to 7 centigrammes as a rule and frequently observed symptoms of intoxication which, however, disappeared after some time without serious consequence. Severer symptoms were once observed in a case of the radical cure for hydrocele, in which instance 5 centigrammes were injected into the skin and about 1 centigramme injected into the tunica vaginalis. The toxic manifestations were the following: Contraction and anæsthesia of the extremities, labored respiration, enlarged pupils, and finally threatened syncope. All these symptoms disappeared soon, except the weakness, which continued for some time. Ruénu closed his part of the discussion with the admonition that more than 10 centigrammes of cocaine should never be used for local anæsthesia if used hypodermically.

Schwartz had used cocaine over three hundred times as a local anæsthetic and

had never had a case of poisoning. To be sure he used only very small doses, especially when operating on or around the face, head, or trunk. When using the drug upon the extremities he always first applies an Esmarch's bandage in order to hinder the rapid diffusion of the drug. In the extremities he used from 5 to 7 centigrammes but in operations about the head or trunk never more than 5 centigrammes, and regarding this as a strictly maximal dose. The size of the dose, claims Schwartz, should differ materially with the location of the operation, and with the susceptibilities of the individual to be operated upon. In any case, however, it should not, in his opinion, exceed seven or at the most eight centigrammes.

Regnier follows in Schwartz's footsteps regarding the use of only small doses. Those usually employed by him ranging from 0.04 to 0.05 gramme. He has only observed to act in a untoward manner in patients troubled with cardiac affections. In these, indeed, the drug cannot be used too cautiously. Once he injected one centigramme in a patient suffering from cardiac dilatation and the patient was threatened with fainting. A similar dose —one centigramme—was injected into a patient suffering from mitral insufficiency, for the purpose of causing anæsthesia prior to the extraction of a tooth. The symptoms produced were progressively as follows: pallor of the face, slowing of the pulse, asphyxia, and deep unconsciousness. All these symptoms rapidly disappeared, but other cardiac complications ultimately increased and the patient died within a month.

Reclus, the well-known writer, pointedly asked whether indeed there were any subcutaneous dose of cocaine which could be used with absolute safety, and went so far as to even suggest the advisability of discarding the drug from the practice of surgery as unsafe and dangerous. According to his investigations of the subject he has found that in all fifteen deaths from the use of cocaine have been reported in medical literature. Of these two at least should at once be set aside; in one 1.60 grammes and in the other 1.50 grammes were exhibited internally. Three more of the cases included in the above fifteen cannot either be counted among the casualties resulting from the legitimate use of the drug, since in these the drug was inhaled in form of vapor or spray in solution, and the quantity of cocaine that was absorbed could not be accurately determined. This mode of using the drug should, by the way, in our estimation be entirely discarded.

There remain, therefore, nine fatal cases on record following the use of cocaine.

Five of these may be again excluded on account of the enormous dose employed, viz., 0.50 to 1.50 grammes hypodermically. In two fatal cases reported by von Berger the hypodermic dose was 0.38 grammes, and in a third also with a lethal ending 0.22 grammes of cocaine.

We now know therefore that injections of 0.22 gramme of cocaine should never be employed. In point of fact, however, much smaller doses are sufficient to produce local anæsthesia. Doses even of 0.20 gramme are not only dangerous but entirely superfluous. Large operations such as gastrotomy or castration can be painlessly performed after the injection of 0.12 gramme of the drug.

Now it is a fact that two cases have been published in which doses of less than 0.10 gramme have resulted fatally. In one of these—that of Abadie—the patient was a sickly man, seventy-one years old, in whom 4 centigrammes of the drug were injected into the eyelid. In the second case reported by Bouchard the dose was surely not smaller than 0.10 gramme, and in this case the heart of the patient was not normal.

Six centigrammes of the drug dissolved

in 2 grammes of water, will be found amply sufficient to completely anæsthetize quite an extensive operative field. All the same, even such injections must not be made directly into the vessels, not into the serous membranes, since in the latter the absorption is very rapid.

Two years ago Pozzi called the profession's attention to the fact that not more than 5 centigrammes of cocaine should be used hypodermically for surgical purposes.

Lucas-Champonniére at the meeting above referred to, expressed the wish that the discussion in question should be given as great a publicity as possible, so that practicing physicians should be brought to fully realize the possibly grave dangers attending the indiscriminate or even unguarded use of cocaine. The use of cocaine is so extended, especially on the continent that there is scarcely a tooth pulled or a cup applied without its being called into requisition. Explicit data regarding its judicious use cannot therefore, be, of aught but value to the profession.

SOME CRITICAL REMARKS ON SJOQVIST'S METHOD OF DETERMINING HYDROCHLORIC ACID IN THE GASTRIC JUICE.

Dr. Dmochowski, in verifying the Sjöqvist method of determining the amount of hydrochloric acid in the gastric juice, became convinced that in the application of this method, regarded from a chemical point of view, errors are possible, and that it does not therefore, answer the purpose to which Wagner had already directed attention. According to the author, the inaccuracy of this method is due to: (1) that baryta chlorate, when heated, decomposes into hydrochloric acid, which volatilizes, and oxide of baryta; (2) that the oxide of baryta thus formed combines with carbonic acid; (3) that the resultant carbonate of baryta, added abundantly to the gastric juice, also decomposes, forming baryta hydrate. The first two conditions impair the analytical results in one direction, and the third in another.—*Gazeta Lekarska*, August 10, 1891.

Book Reviews.

CEREBRAL MENINGITIS: Its History, Diagnosis, Prognosis and Treatment. By Martin W. Barr, M. D., Resident Physician in Pennsylvania Training School for Feeble-minded Children, etc. Detroit, Mich: Geo. S. Davis.

Another volume of the Physician's Leisure Hour Series is before us in the shape of a monograph upon cerebral meningitis in all its medical aspects. The author has endeavored to compile a treatise containing in as little space as possible the various forms of meningitis, together with the general history of the disease and its treatment.

In beginning the subject and in defining the meaning of the term meningitis, the author states that the arachnoid is never the seat of inflammation. This is contrary to a wide-spread belief, and we think that the statement should have been somewhat qualified. All admit the secondary involvement of the arachnoid by extension from the pia mater, and a large number of the most experienced clinical observers still believe in the possibility of acute arachnitis. If such cases do occur they are excessively rare, and as far as practical purposes are concerned the arachnoid may be wholly disregarded in the consideration of cerebral meningitis. For the sake of scientific accuracy it is, however, well to admit the occasional occurrence of simple arachnitis, because cases have been published which seem to prove conclusively that it can occur.

The classification adopted is simple and sufficiently expressive. Pachymeningitis is divided into external, internal and hæmorrhagic; the first being acute and the last two chronic affections. Simple meningitis is divided simply into acute, subacute and chronic; and further subdivided with reference to its situation into basilar, diffused, verticular and meningo cerebritis. Tubercular meningitis is classified according to its location only.

The author's observations of the disease in question were mainly confined to about fifty cases of meningitis occurring chiefly in mentally defective children, who are peculiarly liable to this affection. He has thus had a rich opportunity for study. The most remarkable statement is that concerning the brilliant results of the

treatment of these cases; thirteen out of the total number of fifty-one having recovered. This is an exceptionally good percentage of recoveries, especially when we consider the type of cases with which the author had to deal. His treatment consisted in using the iodide and bromide of potassium freely after the febrile stage of the disease. In the beginning he controls fever by drop doses of tincture of aconite and tincture of belladonna, well diluted with water. If necessary antifebrin is employed in three-grain doses. If stimulants are indicated by the condition of the pulse they are cautiously given. Calomel is administered to move the bowels. The diet is exclusively milk. Antipyrin and cocaine are used to prevent severe vomiting.

In conclusion, we may say that the book contains much valuable information. The opinions of the most prominent authorities are freely quoted, and the author has evidently taken particular care to present the subject impartially. He has not hesitated, however, to give his personal views, which materially add to its interest when we consider the excellent results in the treatment of his cases. The chapter on hæmorrhagic pachymeningitis is well-written. The author might, however, have noted the excellent observations of Dercum and other Americans regarding the ætiology of the affection.

LAVAGE IN CHRONIC GASTRIC DISEASE.

Dr. D. H. Attfield (*Practitioner*) states that the results of gastric lavage are eminently satisfactory. Vomiting is entirely checked as a rule after at most two or three repetitions. By use of the tube as soon as early symptoms appear the patient is saved hours of debility, nausea and pain; the precursors of acute vomiting. Decrease of pain resultant on vomiting occurs as a consequence, either of the removal of the reflex contraction of the stomach on slimy fermenting contents or as a result of removal of gastric irritation by washing out irritants. Appetite is invariably increased. The stomach tendency to dilatation is checked and removed, thus breaking up a vicious circle of debility producing gastric irritation and resultant gastric irritation increasing debility.

Correspondence.

DR. PHELPS MISQUOTES DR. SAYRE.

To the Editor of The Medical and Surgical Reporter:—My attention has just been called for the first time, to an article in your journal, of July 9th, 1892, by Dr. A. M. Phelps, which contains a misstatement, of so gross a nature, that I must contradict it.

On page 49, of your Journal of that date, Dr. Phelps says, "If you consult Dr. Sayre's book on 'Orthopedic Surgery,' you will find a case of hip joint disease reported, in which a child was kept in a wire cuirass for a few months, and the child not only came out with anchylosis of the opposite hip, but of the joints of the opposite extremity, and of the entire spine, and this was attributed to the immobilization; *yet strange to say, the side in which the disease existed, recovered without anchylosis.*"

The italics are mine. I will now quote the case Dr. Phelps refers to, as published in the second edition of my Orthopedic Surgery, pages 18 and 19, showing the inaccuracy of Dr. Phelps' statement.

"The case is worthy of recital. It was one in which there was fully developed disease of the hip joint. The lad lived at a long distance from the city, and the gentleman who performed the operation of tenotomy, did it in a skillful manner.

The limbs were dressed in the ordinary wire breeches, and the physician who had the case in charge, was instructed with the greatest care concerning the necessity of frequently removing the dressing, performing slight manipulations and then replacing it. The case had been for three or four years, one in which the patient had suffered the most intense agony, and had slept only under the influence of large doses of anodynes. As soon, however, as the patient was placed in the immovable apparatus, and properly extended, he was so perfectly comfortable and easy, and slept so well at night, that the doctor who had him in charge, thought it unnecessary to remove it, fearing he might not be able to replace it, and make him as comfortable as he then was, and had been since the apparatus had been applied. He was, therefore, permitted to remain in the wire

breeches for nine months, simply because he was so free from pain. The result was that the disease was cured; but Nature, had unfortunately cured it by *anchylosing not only the hip joint, which had been the seat of disease*, but the hip joint upon the opposite side, as well as both knee joints and both ankle joints." This sentence is not italicised in my book.

Comment on these two paragraphs is unnecessary, but Dr. Phelps' misquotation, places me in so false a light, before the profession, that I hope you will give this letter early insertion in your valuable journal, and oblige

Yours truly,
LOUIS A. SAYRE.

August 10th, 1892.

Periscope.

THERAPEUTICS.

THE USE OF VASELINE.

Dr. Novotny warns against the use of vaseline as a lubricator for sounds and other instruments introduced into the bladder, as he has twice found this insoluble vaseline serving as a nidus about which a mass of detritus had collected, and giving opportunity for the deposit of urinary sediment. In one case the quantity of ditritus thus massed together upon a quantity of vaseline weighed ten grammes.—*Memorabilien.*

A FATAL CASE OF BROMIDE OF ETHYL NARCOSIS.

From Prof. Billroth's clinic comes a warning which is reported by Dr. Alfred Gleich, in the *Wiener klinische Wochenschift*, 1892, No. 11, S. 167. Having successfully employed this anæsthetic in nearly four hundred instances, he records a fatal issue after the use of five drachms. The operation was multiple incision in a carbuncle in right deltoid region, and death resulted in three minutes from the commencement of the narcosis. the heart and respiration ceasing. The necropsy showed parenchymatous and fatty degeneration of the walls of both ventricles of the heart, as did the liver, and parenchymatous degeneration of the renal epithelium. —*Amer. Jour. Med. Sci.*

CRYSTALLIZED NITRATE OF ACONITE.

Lépine (*Sem. Mèd.*, March 30th, 1892) insists on the risks of prescribing crystallized nitrate of aconite in large doses: and points out that in the standard works on therapeutics the dose is stated to be 2, 3, and even 4 milligrammes a day, while in his experience it ought only to be given in doses of $\frac{1}{10}$ to $\frac{1}{8}$ of a milligramme, repeated every four—or, better every six—hours. In some cases is is necessary to give $\frac{1}{4}$ of a milligramme at the same intervals. He considers it necessary in every case not only to test the susceptibility of the patient, but also to know the degree of toxicity of the specimen of the drug that is being used, as this varies with the locality from which the aconite has been obtained for its preparation.—*Brit. Med. Jour.*

NOTES ON NEW ANTISEPTICS.

If we trace back the list of antiseptics and disinfectants to an early date we find that those mostly in use were sulphur, the halogen compounds, mercury, coal tar products and some essential oils. If we again follow up the development of antiseptics we find that these materials form the basis of most of our new antiseptics in a more defined and definite composition. Thus, in place of the old method of burning sulphur, sulphurous acid in many cases replaces it, and compounds of sulphur, as sulphonates, are used in combination, as in the case of ichthyol (ammonium-ichthyol sulphonate), soziodel (di-iodoparaphenol sulphonic acid), and many others. The same may be said of the halogens, iodoform, iodo and di-iodo-salicylic acids iodol being iodine derivatives, while the other elements forming this group have corresponding compounds in a greater or less variety.

The mercurial preparations are well known to us, the mercuro-zinc cyanide being one of the developments of chemistry with regard to antiseptics.

The coal tar products are both numerous and varied, and many varieties of new combinations are continually being found that promise to be of use as antiseptics.

Essential oils have been combined with other elements to form valuable antiseptics, aristol (dithy-moliodide) being one of

these, while oxidized pine oil with camphoric acid forms one of the most popular disinfectants of the present day.

Time does not allow me to formulate or describe the following preparations fully. I will therefore give such description as is necessary, with the hope that the members of the association will look into the matter for themselves for further information.

Among new antiseptics from coal tar derivatives may be mentioned pyoktanin, methyl-violet, the most antiseptic of the aniline colors. A solution of 1 in 1000 is used in various eye diseases, phthisis, ulcers, etc. There is a yellow variety commonly known as auramine, also used antiseptically.

Lysol is a saponified phenol derived from cresols, and contains the higher homologues of carbolic acid. It is said to possess higher antimycotic power than carbolic acid, and to be less poisonous. This preparation is much used in Germany at the present time.

Retinol, a distillation product of pine resin, is a viscid fluid hydrocarbon. It is a non-irritating and stable antiseptic.

Europhen, iso-butyl-ortho cresyl-iodide, contains 23 per cent. of iodine, and is non-poisonous.

Dermatol, a basic gallate of bismuth, forms a powerful antiseptic and dessicant.

Sulphaminol, thiooxydiphenylamine, the antiseptic action of which is due to its decomposition in contact with the fluids of the body into sulphur and phenol.

Monochlorphenol is prepared by the action of chlorine on cooled phenol. It is a powerful antiseptic and less irritating than trichlorophenol.

Camphoid, though only a mild antiseptic in itself, is a valuable adjunct to this class of bodies, as it forms a ready method of applying antiseptics to the surface of the skin, and owing to its composition (of spirit, camphor and hydroxylin) it forms a valuable solvent for substances such as salicylic acid, resorcin, hydro-naphthol and many others.—*S. A. Walton, in Pharmaceutical Journal.*

ANTINERVINE (SALICYLBROMANILIDE).

This substance is prepared by the interaction of salicylic acid, bromine, and acetanilide; it is a crystalline solid, insoluble in cold water, but soluble in hot water, alcohol, and ether, possessing a slightly acid but not disagreeable taste. It has been tried clinically by Bradford, of Philadelphia, Woodbury (*Med. Times and Register*, April 25th, 1891), and more recently by De Filippi (*Rif. Med.*, No. 201, 1891). While these differ as to the exact chemical constitution of the drug, they are are agreed as to its utility in a variety of conditions, and especially in cases of articular rheumatism and neuralgia. G. Laurenti (*Gazz. degli Oipitali*, March 17th, 1892) now gives his own personal experience with the drug, and comes to the following conclusions:—(1) It can be used with advantage in all forms of abnormal excitement of the nervous system, whether to subdue neuralgia or as a general nervous sedative (2) In rheumatism it may be used, and seems undoubtedly indicated as a drug comprising in itself antirheumatic, antipyretic, and analgesic properties. (3) Its low price and feeble toxicity, together with the evidence above given, render antinervine a useful addition to our list of remedies.—*Brit. Med. Jour.*

DIPHTHERITIC ANGINA AND ITS TREATMENT BY CRUDE PETROLEUM.

O. Larcher, Paris (*Bulletin de L'Academie Royale de Medicine Belgique*, February 27, 1892) recommends highly the use of crude petroleum in faucial diphtheria. Of forty-two cases in which he employed the remedy only two died. One of these were moribund when first seen, and in the other case the parents did not follow directions. Of the remaining forty cases one was sixty-five years old, one twenty-seven, one eighteen months and the rest between three and fifteen years. The treatment consists in gargles or applications or both alternately. In only two cases was the treatment restricted solely to the petroleum. But in all cases there was a rapid diminution of the false membranes, a separation of the edges and a profuse secretion which favored their separation. When thrown off they were immediately reproduced, but much thinner and smaller. The swelling of the glands diminished rapidly as the membranes decreased. Towards the end of the third day of the use of the petroleum an erythema appeared on the front of the neck and remained as long as the treatment continued. In only seven cases did paralysis

of the soft palate occur. He sums up his conclusions as follows:

(1) Crude petroleum alone is sufficient to ensure cure of faucial diphtheria. (2) Its use is free from all serious objection. (3) It does not interfere with the use of the other remedies.—*Univ. Med. Mag.*

GLYCERIN IN HIGH DOSES.

Catillion, at a recent meeting, remarked (*Med. Abstr.*) that while it is true that glycerin is a triatomic alcohol, it has none of the physiological effects analogous with those of alcohol even when given in doses as high as 40 oz. Constantin Paul, in contradiction, stated that he had met with the case of a man who was accustomed to take three ounces of glycerin daily; he presented so much cerebral excitement that it was necessary to confine him to an asylum for a considerable time. He did not use any wine or other alcoholic liquid.

TREATMENT OF TENIA WITH THE SALTS OF STRONTIUM.

M. Laborde (*Revue de Therapeutique Medico-Chirurgicale*, May 1, 1892) gives his treatment of tenia with salts of strontium. He uses lactate of strontium 20, glycerin q. s., water 120; giving f℥ss every morning for five days. He claims that it is nearly always successful.

PIPERAZIN.

C. Mordhorst has employed piperazin in doses of one to two grammes (fifteen to thirty grains) daily, in five cases of gout. He has found that piperazin has but little effect in lessening the acidity of the urine, but causes a marked diminution in the amount of crystalline urates; he has never been able to cause their entire disappearance by the use of this remedy. Piperazin does not, therefore, possess more energetic powers than the ordinary alkaline waters (Ems, Vichy, Carlsbad), and is rather inferior to the waters of Wiesbaden. Nevertheless, it must be remembered that piperazin is never followed by any secondary untoward effects, and that under its influence diuresis is markedly increased. Piperazin may, therefore, be used in all cases of gout with perfect safety. The most efficient treatment of gout is by the use of the waters of Wiesbaden; it neutralizes the acidity of the urine (which sometimes is neutral or alkaline without losing its limpidity), and often causes the total disappearance of the crystalline urates.—*Les Nouveaux Remèdes*, May 8, 1892, p. 205.

MEDICINE

IODIC PURPURA.

A case of generalized purpura over the trunk and the four extremities, from the ingestion of 1 gramme of iodide of sodium, is reported by Prof. Lemoine (*La Médecine Moderne, No. 52. Rev. Inter. de Bibliog. Mèd.*, April 25, 1892). This case differed from others previously related in that the eruption was quite confluent, forming arborizations and streaks over the skin; in its generalization, and in the intense itching that was produced. The purpura appeared twice under the influence of the sodic iodide, and at an interval of 15 days. The eruptive patches came on a few days after the administration of the drug and lasted for about a week. The patient had congestion of the kidneys and liver, and had previously suffered from albuminuria and jaundice. These latter organs could not perform their excretory functions, and it is probable, according to the author, that the iodide of sodium had to be eliminated by the skin and thus the eruption was produced. It would be interesting to examine, in cases of eruption caused by drugs, the state of the liver and kidneys, as it is probable that lesions of these organs may play an important part in the pathogenesis of said eruptions.

THE PATHOGENESIS OF BERI-BERI.

After describing some of the geographical peculiarities of South America, and the frequency of beri-beri and yellow fever in the north of Brazil, Leopold (*Joun. des connaiss. medic.—Berl. Klin. Woch.—La Médecine Moderne*, May 12, 1892) calls attention to the fact that there exist two forms of beri-beri. One of those forms is characterized by a general œdema and cardiac dilatation; the other form, by paralytic phenomena. The author, then, refers to the experience of Muzzo and Morelli performed in the Laboratory of Bacteriology

of Montevideo. In cultures made of the blood of animals suffering from beri-beri, four different specimens of micro-organisms were found, one of them being a micrococcus. This blood charged with such organisms, injected into that of healthy animals, produced a general degenerative neuritis; intra-meningeal injections of the same fluid produced the same phenomena. Sub-cutaneous injections practised in thirty animals caused the production of the œdematous form of the disease, accompanied with dilatation of the heart. Colonies of micrococci were found in the pericardium and the endocardium, and the changes observed in the muscles were characterized by a destruction of the muscular substance, the sarcolemma appearing, in the majority of cases, as an empty sac. The multiple neuritis described by Baetz and Scheube was noticed in all cases, that is, there was a total disappearance of the axis cylinder, accompanied with rupture of the myeline and a round-cell infiltration into the membrane of Schwan. There were, at the same time, a regenerative and a degenerative process. It was the peripheral nervous system that was particularly affected, but in the advanced cases the lesion extended itself to the posterior columns of the spinal cord, giving rise to the production of symptoms analagous to those of locomotor ataxia. In the majority of cases, nevertheless, the cord remained intact, and it was only in the advanced cases that the anterior horns became also implicated.

PLEURISY CAUSED BY THE BACILLUS OF TYPHOID FEVER.

In a note presented to the Academie de Mèdecine of Paris; Kelsch (*Rev. Inter. de Bibliog. Med.*, April25,1892) reported the following case: A man, 22 years of age, suffering from pleurisy of the left side, was admitted to the hospital. In the liquid extracted by thoracentesis (the pleurisy was hæmorrhagic) there was a bacillus resembling that of typhoid fever. The liquid, by inoculation, produced in guinea-pigs a pleurisy analogous to that from which the patient was suffering. Later, the effusion became purulent but it only contained then the bacilli of Eberth. The patient died tuberculous. At the autopsy not a single lesion peculiar to typhoid fever was found.

DISTINCTIONS BETWEEN THE BACILLUS OF TYPHOID FEVER AND THE BACILLUS COLI COMMUNIS.

At a meeting of the Société de Biologie, Dubief (*La Médecine Moderne*, No. 42, 1891, p. 745) reported that in making comparative experiments with the bacillus of typoid fever and the bacillus coli communis, he found that both organisms caused the fermentation of glucose in about equal degree, the colon-bacillus, however, giving rise to the formation of a large percentage of lactic acid. In consequence of this difference, the typhoid-bacillus but slowly causes the coagulation of milk, while the colon-bacillus produces the same result more speedily.

Before the Académie de Médecine, Roux and Rondet (*La Médecine Moderne*, 1891, No. 43, p. 741) maintained the identity of the bacillus coli communis and the bacillus of typhoid fever. The apparent differences that exist are considered as dependent upon the varying conditions to which the organism may be exposed.

A METHOD OF INCREASING THE INTENSITY OF HEART SOUNDS.

Azouley (*Gaz. des Hôp.*, May 12, 1892) communicated to the Academy of Medicine of Paris, May 10th, 1892, a method of procedure which allows of the more easy detection of cardiac *bruits*, when they are only slightly marked, and which is capable of bringing them into evidence when they are absent during our examination of the patient. It consists in making the patient lie as horizontally as possibly, with the arms raised above the head, and the head and legs raised as much as possible on cushions. Cardiac tension is thus increased, and the physical signs accentuated.—*Brit. Med. Jour.*

MENINGITIS CEREBROSPINALIS.

Dr. Oebeke reports the cases of two brothers who rapidly succumbed to a purulent meningitis. A bacteriological examination of the cerebrospinal fluid showed, in both cases, the presence of chain-cocci, which were cultivated upon agar-agar, but did not grow into a second generation. These cases are published to show that the disease is not a "masked" pneumonia as has been claimed, but is an independent disease.—*Berlin Klin. Wochensch.*, No. 41.

AVULSION OF THE STAPES IN ANIMALS.

Botey (*Ann. des mal. de l'oreille et du larynx,* xvii, 1), draws the following conclusions from his experiments: 1. The avulsion of the stapes in animals is an entirely innocuous operation. 2. Whether the oval and round membranes are torn or not, and whether labyrinthine fluid flows out or not, a new membrane, much thicker, is always formed after this operation. 3. In all cases, after the removal of the stapes, the animals hear well, but at a shorter distance than before. 4. In animals which have neither membrane nor columella, hearing is a little better than in those in whom the drum-membrane has been removed, while the stapes is left in place. 5. This operation would probably be equally innocuous in man, if it were possible to execute it equally well and under strict antiseptic precautions. 6. The drum-membrane and ossicula are not indispensable to hearing, but they simply re-enforce the intensity of sound-waves.

MOVABLE KIDNEY AND HYDRONEPHROSIS.

Lucas (*British Medical Journal*, No. 1617, p. 1343) maintains that movable kidney is a condition that, during displacement, may, and often does, lead to hydronephrosis and subsequent destruction of the liver, in consequence of twisting of the pedicle, or pressure of the organ upon the ureter. To avoid this danger, and to relieve the patient of pain, he recommends nephrorhaphy. Even when hydronephosis has become pronounced, relief may be afforded by nephrorrhaphy, and further degenerative change prevented. Three cases are reported, in two of which nephrorrhaphy was performed; in one, nephrecotomy was performed; in one, operation was declined.

EPILEPTIFORM ATTACKS FROM TÆNIA.

Martha has gathered twenty-two observations where epileptiform attacks could undoubtedly be traced to the presence of tænia. According to him the attacks are not much different from those of classic epilepsy. Expulsion of the parasite causes a cessation of the spasms; yet the attack has not the characteristic brusqueness of true epilepsy. The patient finds time to throw himself upon a bed, or to call for help, while grave injuries and falls are exceptional. The initial cry, biting of the tongue, and frothing of the mouth are inconstant signs and of no great diagnostic importance. The convulsive and comatose periods are of longer duration than in true epilepsy; the attacks have a tendency to become periodic. The male sex is more frequently attacked than the female. Nervous hereditary or personal antecedents have no important influence. Unilateral movements are not regularly observed as in true epilepsy.—*Arch. Général de Méd.*, Nov. and Dec., 1891.

IODOFORM DERMATITIS.

A well marked case of this affection is recorded by Legiehn. The patient was a man suffering from purulent catarrh of the right middle ear, for which syringing with warm water and insufflations of iodoform were prescribed. The discharge, which had lasted five weeks, ceased in three days, and the hearing power considerably improved. In order to be on the safe side the patient continued to use the iodoform, until on evening he experienced immediately after an insufflation a feeling of warmth in the ear, and in the morning found to his astonishment his face swollen. The right ear and right half of the face and neck were reddened, much swollen, and œdematous; and the cheek was covered with eczematous bullæ. There was moderate itching and marked feeling of heat complained of in the inflamed parts; and there being a possibility that the iodoform had something to do with it, the powder was discontinued, and ichthyol ointment used, under which the eczema rapidly healed. Two weeks after, the patient noticed a return of the otorrhœa, and although convinced that the insufflation of iodoform was the cause of the previous swelling of the face, he again employed it, hoping to receive marked improvement of the discharge. About an hour after, he perceived a hot sensation in the outer ear; and in the course of the night, the ear and face had assumed the same appearance as before. The former treatment sufficed to make it disappear as rapidly as before. Leghiehn thinks there cannot be the least doubt that the dermatitis depended upon the iodoform, as on the first examination there was nothing in

the ear passage that could possibly cause it, and its recurrence on the second occasion confirmed this fully.—*Therap. Monatshefte*, No. 4, 1892.

HERPES ZOSTER.

V. Valdettaro, in a graduation thesis (Genoa, 1892) relates experiments which show the accuracy of inferences previously made by clinicians regarding the existence of a simple and septic form of herpes. In the simple form the fluid from the vesicles contained no organism which produced symptoms in animals. When inoculated in gelatine the results were negative. In the other variety, in which the vesicles contained a whitish, thick, purulent discharge, the organisms, which grew in white transparent colonies in agar-agar, produced septic symptoms when inoculated into the cornea of animals. The author regards the sepsis as essentially distinct from zoster, with which it is present as a complication.—*Brit. Med. Jour.*

ON THE CAUSE OF COMPLICATIONS AND EARLY DEATH AFTER SEVERE BURNS.

Silbermann (*Virchow's Archiv*, Bd. cxix, p. 488) gives the following summary of observations:—

1. After severe burns not only is there an alteration in the shape of the red blood corpuscles, but there is also diminution of their vital properties, shown by their changed reaction to dessication, heat, compression, salt solution, staining, etc.

2. These changes and the presence of numerous broken up corpuscles result in the formation of numerous thrombi, occluding vessels, and causing stasis in various internal organs especially in the lungs, kidneys, intestine, liver, brain, and subcutaneous cellular tissue.

3. These points of occlusion of vessels, which are most numerous and striking in the branches of the pulmonary artery, are formed during life.

4. There results therefore considerable obstacle to the emptying of the right ventricle, with consequent general venous stasis and corresponding arterial anæma.

5. These conditions (general venous stasis and arterial anæmia, and local points of thrombosis and stasis) produce hæmorrhages, ulceration, and parenchymatous changes in various organs.

6. Thus may be explained, as occurring after severe burns, dyspnœa, cyanosis, coma, smallness of pulse, various lung affections, convulsions, anuria, and lowering of the body temperature.

7. The fatal result from comparatively limited burns in children may be due to (1) the more intense action of heat upon the corpuscles owing to their thinner skin; (2) the weaker resisting-power of their corpuscles; and (3) the comparative weakness of their heart and circulation generally.—*Centralbl. f. Chir.*, May 30th, 1892.

THE GONOCOCCUS IN PURE CULTURE.

Gebhard (*Berl. Klin, Woch.*, 14th March, 1892). The artificial cultivation of the microbe of gonorrhœa has hitherto been regarded as one of the most difficult tasks in practical bacteriology. The method published by Bumm in 1885 was of such a nature that few were able to obtain his results. An important advance was made by Wertheim in 1891, in that he showed the possibility of obtaining pure cultures from gonorrhœal pus by the plate method. Gebhard has made cultures successfully from eight cases (one of them being a case of ophthalmia neonatorum). He used, with some modifications, the nutritive medium prescribed by Wertheim —namely, a mixture of equal parts of human blood serum (obtained from retroplacental blood) and agar-jelly (Fleischinfuspeptonagar). The plates are kept at the body temperature, and at the end of twenty-four hours very small whitish-yellow colonies are distinguishable amongst other kinds. These continue to grow for a week or two, assuming about the third day a characteristic microscopical appearance. Each one appears, when magnified about fifteen times, as a sharply bounded irregular mass, with a finger-like projection from the centre. The individuals of such a colony are seen as irregular hemispheres varying in size, frequently arranged in fours, and staining readily with the aniline dyes, but not by Gram's method. The coccus here described cannot grow on the ordinary nutritive media, and thrives but poorly on blood serum alone. Inoculated on the mucous membrane of the human urethra, it produced a purulent catarrh, running the clinical course of gonorrhœa, and showing in the catarrhal products gonococci.

TRAUMATIC PORENCEPHALY.

The patient was 11 months old when he came under observation. He then showed a swelling over the right parietal bone which had developed five weeks before. Three exploratory punctures showed a bloody serum. The swelling showed distinct pulsation, and measured 9.5 by 7.8 cm. A distinct fissure in the bone could be felt. A diagnosis of meningocele spuri traumatica was made. Somnolence developed and operation determined on. A sagittal incision discharged a quantity of yellow serum. A fusiform fissure 10 cm. long and 1 cm. wide at its widest part was found running from above and behind, downward and forward. Two holes as large as peas were found in the dura. There was a very free discharge of serum and the wound was five months in healing. At this time it was seen that the fissue in the bone had enlarged, an oval space 3 by 2.5 cm. being present with everted edges. The soft parts covering this were bulging. Slight spasm of the left angle of mouth and left eyelid occurred frequently. Death from pneumonia 8 months after operation. Autopsy showed a fissue in the brain corresponding to the fissure in in the bone. The posterior cornu of the lateral ventricle extended to the dura in this locality.—*Prof. Weinlechner and Dr. Kolisko, Prog. Med. Wochensch., No. 33, 1891.*

HEMIANOPSIA WITH HALLUCINATIONS ON THE BLANK AREA OF THE VISUAL FIELD.

Dr. H. Bidon gives some curious details of a case of hemianopsia which he had recently observed. The patient was a soldier, æt. 59, who had had no serious illness, but had fallen into habits of spirit drinking. On February 20, 1891, he had a slight apoplectic attack, with loss of consciousness for two hours. When he came to himself he complained of a headache and something the matter with his eyes. His speech was slow, but there was no aphasia, and no paralysis of any part of him. He kept on drawing attention to his eyes and complaining vaguely that he was going blind. This led to a careful examination of them, and it was easy to establish that there was a complete left lateral homonymous hemianopsia, of which there had been no sign before his apoplectic attack. The left half of the visual field in each eye was completely blank, the right slightly contracted. But the most curious point was that in the blank visual area, and in that alone, there were frequent hallucinatory appearances of all sorts: figures in strange dresses, shadowy forms and confused scenes of every description, which for the first few days puzzled and distressed him. To these, however, he grew accustomed after ten days or so, and by the end of six weeks they had completely disappeared, although the hemianopsia remained undiminished and unaltered. At the end of another six months the hemianopsia still persisted, but there had been no return of the hallucinations, and no fresh cerebral injury. The symptoms were few but distinct, and pointed to a small lesion in the right occipital lobe. That it was cortical was probable from the abscence of all other motor and sensory consequences; that it was a thrombosis rather than a hæmorrhage was more probable if its position was cortical. That what inhibited the functions of a limited area should excite its neighborhood was not unlikely; and Tamburini has shown that the excitation of some cortical centres may produce visual hallucinations, though this combination of excitant and inhibitory effects in such a limited area is both rare and interesting.—*Revue de Méd.,* p. 1014, December, 1891.

HISTOLOGICAL EXAMINATION OF THE MIDDLE AND INTERNAL EAR IN A CASE OF DEAF-MUTISM.

Dr. Arno Scheibe, of Munich, examined the two temporal bones in a case of deaf-mutism, and the results, as translated by Dr. Spalding, form an interesting contribution in the *Archives of Otology.*

Shortly, the middle ear was found to be normal apart from some thickening of its lining mucous membrane, and partial degeneration of the tensor tympani muscle. In the labyrinth there was atrophy of the nerves of the cochlea, sacculus, and posterior ampulla, as well as alterations in the membranous structure of the cochlea and sacculus. This atrophy was confined to the nerves in those three parts—that is, to those three branches which, before their entrance into the petrous bone, compose the posterior ramus; while the nerves of the utriculus and the other two ampullæ

which compose the other trunk of the auditory nerve—the anterior branch—were only slightly affected.

There was no trace of any former inflammation in the labyrinth, which is usually the case when deaf-mutism is associated with atrophy of the auditory nerves.

A description of the microscopic appearances in the various parts is fully given in the *Archives of Otology*, January, 1892.

SURGERY.

SURGICAL TREATMENT OF GRANULAR CONJUNCTIVITIS.

According to Darier(*Arch. D'Opthalmologie*, p. 95, 1892) granular conjunctivitis is evidently an affection of microbian origin, and its definite cure, as in other diseases of the same nature, like lupus for example, cannot be obtained except by complete destruction of the infectious tissue. The classical treatment is, therefore, in rebellious cases, substituted by the surgical treatment. This treatment as practiced in the Clinic of Dr. Abadie, consists in the scarifying, *rubbing* and scraping of the granulations, under chloroformization, and afterwards in completely exposing the eye-lids by reversion. After this manœuvre, washings with a solution of corrosive sublimate, of the strength of 1 to 500, must be made use of. On the following days, these lotions are renewed and the work of reparation carefully watched. In case of relapses, the *rubbing* is re-applied. The cure is obtained in about fifteen days or a month, at most. In 130 cases granular lids thus treated, not a single absolute failure was recorded; seven patients were operated twice, and one three times. No symblepharon was ever observed. The complications of the cornea are quite rare and always of little importance.

ANTISEPSIS IN OPHTHALMOLOGY.

According to A. C. Dismissas (*Rec. D'Ophthalmol.*, p. 129), 1892, the antisepsis of the instruments and of the operating field is not sufficient to obtain the results desired in the practice of surgical ophthalmology. "Our knowledge," he adds, "of the phenomena of auto-intoxication and auto-infection, ought to remind us of our duty in endeavoring to prepare the organism by a general treatment adequate to every case, and to practice also as rigorous an internal antisepsis as possible; for instance, calomel in purgative doses five days before the operation, the administration on the the following days of salol, salicylate of magnesium and bicarbonate of sodium; finally, general baths, alcoholic frictions, and the use of light diet: milk, eggs, vegetables. Care must also be taken regarding the causes of infection, originating in neighboring parts, the prevention of which can be brought about only by the application of the most rigorous measures. The antisepsis of the lachrymal ducts is of the greatest importance. Warm injections of a solution of the bichloride of mercury, made twice a day, is sufficient in the majority of cases. It is similarly important to disinfect for several days, the nasal and the naso-pharyngeal cavities and the Eustachian tube, by means of douches, injections or insufflations with antiseptic powders. The asepsis of the operating field may be obtained by the daily application of solutions of the bichloride of mercury of the strength of 1 to 4000. In regard to the instruments, these may be rendered sufficiently aseptic by boiling water after they have been placed in absolute alcohol. After the operation it must not be considered sufficient to wash out the field of operation with solutions of corrosive sublimate; it is absolutely necessary to apply antiseptic padding, this being renewed not later than the fourth day." The author terminates his work by recommending, after the operation, the constant application of antiseptic precautions and hygienic measures, as even a late auto-infection may be feared.

COMPRESS LEFT BEHIND AFTER ABDOMINAL SECTION AND PASSED AT STOOL.

Pilate, of Orleans (*Union Méd.*, March 31st, 1892) in April 1890, removed a painful fibroma from a woman, aged 42. In order to protect the viscera, he used sponges and also tarlatan antisepticised compresses. On the evening after operation there was vomiting, then pains in the right flank came on. Phlebitis of the right leg set in. These symptoms soon disappeared, and the patient recovered completely. Six months later pains in the region of the liver occurred; they

were taken for hepatic colic. The pains became diffused over the abdomen, and vomiting and tympanities without fever occurred. At length a rise of temperature set in, and swelling around the uterus was detected. The patient became weak and thin, and an operation was about to be performed when she passed the compress in a mass of hard fæces. The patient at once recovered. Quenu related a case where a compress was left in on account of the confusion caused by the patient threatening to sink under chloroform during operation. The patient died, and the compress was found rolled up in a coil of intestine. Terrillon observed a case where pressure forceps remained eight months in the abdomen, and came out close to the umbilicus.—*Brit. Med. Jour.*

EPICYSTOMY.

Prcf. Weinlechner showed a 74 year patient who suffered from calculi in viscus for 30 years. In 1880 Dummreicher undertook the operation of epicystomy owing to great enlargement of the prostate. Two stones weighing twenty-six grams, urate in character, were successfully removed. Perfect healing took place in three weeks. The operator then remarked over the advantages of the operation for the bladder healing. The patient now returns, complaining of the stream intermitting, as if stone were present. No calculi are present but the assumption is that the trabecular sheath of the viscus falls up against the inlet of the catheter and checks the flow.

A BLOW UPON THE EAR FOLLOWED BY DEATH IN A WEEK.

Heiman (*Arch. of Otol.*, xx, 1) reports the following interesting case: A soldier, aged twenty-one, had been struck on the left side of his face and ear, which caused severe vertigo. The blow caused severe hæmorrhage from the ear, which, however, came on forty hours after the blow. The ear had previously at times discharged pus. The patient died delirious on the seventh day after the injury. The autopsy showed pachymeningitis interna purulenta diffusa, numerous small subarachnoid hæmorrhage, hyperæmia of the substance of the brain and its membranes, and circumscribed basilar meningitis. A decolorized thrombus was found in the superior longitudinal sinus, and dark-thrombi were found in the transverse sinus and internal jugular vein. Three small openings were found on the inner surface of the pyramid which led to the tympanum. The upper surface of the mastoid was found sclerosed, and here there were several small softened areas containing pus and particles of bone. The tympanum and mastoid process were filled with thickened pus. In the mastoid were several large cavities containing pus. Pseudo-membranous bands were found in the middle ear, and the mucous membrane was ulcerated. There was a small perforation in the anterior part of the drum-head.

FRACTURES OF THE SKULL.

Dr. John Ashhurst's rule is, that in depressed fractures, if the fracture is impacked, there is no occasion for trephining as a primary operation. If the bones are not separated there will be no entrance of air to the parts below. If the parts are not exposed to the air the results are apt to be more favorable. When the depression, therefore, is not so great as to cause separation of the fragments, do not interfere. The old rule, that the surgeon should trephine in all cases of compound fracture, the lecturer considers not good. If there are convulsions then the trephine should be used.—*Internat'l Clinics*, Jan., 1892.

TREATMENT OF SYPHILITIC STRICTURE OF THE RECTUM BY EXTIRPATION.

Quénn (*Bul. et Mem. de la Soc. de Chir. de Paris*, vol. xvii., p. 140.) states that the results of the old treatment of syphilitic stricture of the rectum by dilatation by means of bougies or by rectotomy have always been unsatisfactory. Nor could extirpation of the rectum, though repeatedly recommended and performed in Germany, thoroughly satisfy the surgeon as long as the patients were condemned to permanent incontinence. Kraske's method of preserving the sphincters in the treatment of rectal ulceration and stricture was a decided step in advance. For lower stricture without extensive ulceration above, resection of the coccyx and sacrum is unnecessary, incision of the soft parts being sufficient.

OBSTETRICS

DISEASE OF UMBILICUS IN NEWBORN CHILDREN.

Eröss, of Buda-Pesth (*Archiv f. Gynäk.*, vol. xii, part iii, p. 407) gives the results of his observations of 1,000 newborn infants. He paid special attention in each case to the mummification and fall of the stump of the cord under different modes of treatment. He finds that ideal cicatrization of the umbilicus with no local or general morbid changes is not the rule after birth. It was observed in 320, or 32 per cent, of the cases. In 680, or 68 per cent., distinct, severe, or even fatal morbid processes had their origin in the umbilicus. These processes were sloughing of the stump of the cord (147 cases); softening instead of perfect mummification of the stump (182); decomposition of fragments of stump overlooked after the rest had fallen (224); suppuration of the navel (109); ulceration of navel (17): and gangrene of navel (2). (The figures, as given by the author, make a total of 681 morbid cases, although "320" is given as the number of cases of "normal cicatrization" in the same table). Out of the 680 abnormal cases, fever was observed in 220. It disappeared before discharge from hospital in 158 of the infants. Fever, Eröss concludes, is a very precise evidence —often the sole indication for some time— of infection of the infant's system through disease of the umbilicus. As the infants remained but from eight to ten days in the institution where these researches were made, no precise conclusions as to the course and mortality of the fever could be obtained.—*Brit. Med. Jour.*

BELLADONNA IN THE FIRST STAGES OF LABOR.

Dr. Asher, in the *Australian Medical Journal*, says that in all cases in which, in spite of persistent pains, the mouth of the womb fails to dilate sufficiently (especially with primaparæ,) he is in the habit of giving from 20 to 30 drops of tincture of belladonna every hour, or even more frequently. Less than 20 drops will not answer. In every one of numerous cases cited there was energetic and rapid dilatation of the col, diminution of suffering, and a happy delivery. He considers belladonna in every way superior to chloral.

HÆMORRHAGE AT COMMENCEMENT OF PREGNANCY.

Mijnlieff, of Brenklen (*Nouv. Arch. d' Obstet. et de Gynec*, October, 1891), describes a case where a 3-para had an attack of flooding fifteen days after the suppression of the period. The loss was severe, but was stopped by the tampon. Hæmorrhages recurred and caused severe anæmia. The induction of abortion was advised but the patient refused to undergo the necessary steps for that purpose, owing to religious scruples. At length, the movements of the child were felt, and two months later, when the report was read, the fœtal heart sounds were audible. A sero-sanguinolent discharge was still present. Professor Treub reported a similar case, where he induced premature labor on account of the anæmic state of the patient. He discovered a malformation, uterus bipartitus. From one of the cornua a living fifth-month fœtus was removed, from the other an aborted ovum. Mijnlieff describes a case of hydramnios where twins were delivered; a great red mass with much liquor amnii was extracted after the second fœtus. It was a very large thrombus. The patient stated that she had been struck on the abdomen.—*Brit. Med. Jour.*

GYNECOLOGY.

PNEUMOCOCCI IN THE PUS FROM A PYOSALPINX.

Frommel (*Centralblatt für Gynäkologie*, 1892, No. 11) reports the following case: The patient, aged thirty-eight years, had a tuberculous disease of the left apex at the age of twenty-three, and later Pott's disease. She had aborted seven times. Laparotomy was performed for pyosalpinx on the right side; during the operation pus escaped into the cavity and the patient died of septic peritonitis on the third day. At the autopsy no old changes were found in the lungs. Bacteriological examination of the pus from the tube revealed the presence of microörganisms exactly resembling Fränkel's pneumococci, which retained their virulent properties in pure cultures, animals inoculated with them rapidly succumbing. Fränkel himself confirmed the diagnosis:

Aside from the interest attaching to the unusual presence of these cocci in a pyo-

salpinx, is their extreme virulence toward the peritoneum, although none were found in the cavity after death. Since the autopsy was not performed for forty-eight hours, it is quite probable that they were originally present and were destroyed post-mortem. How they entered the tube it is impossible to say. Neither in this case, nor in a similiar one reported by Zweifel, was any pneumonic process found in the lungs. They must have been in the air and found access to the genital tract through the vagina in the same manner as other ubiquitous organisms.—*Amer. Jour. Med. Sci.*

TREATMENT OF METRORRHAGIA.

In certain cases of obstinate metrorrhagia, ergotin, extractum hydrastis Canadensis, ice, and applications of tampons are alike incapable of arresting the hæmorrhage. In such cases a hypodermatic injection of sulphate of atropine has been recently recommended. It is given in doses of $\frac{1}{200}$ grain twice daily. In one case, in which the hæmorrhage had existed for a fortnight, it was completely arrested after the fourth injection. In a second, when the patient was in a state of collapse, the first injection was followed by a return of the normal temperature and increase of the pulse-rate; after the second the hæmorrage was diminished in a striking degree; after the third it entirely ceased. A moderate dilatation of the pupils was the only secondary effect observed.—*The Provincial Medical Journal*, May. 1892, p. 252.

COMPENSATORY HYPERTROPHY OF THE OVARY.

Dr. Airstoff, in his dissertation on the compensatory hypertrophy of the ovary, the materials for which he obtained from the pathological department of the St. Petersburg Medico-Chirurgical Academy, under Professor Ivanovski, states that, according to his observations, when one ovary has been removed the other one increases in size and weight, the follicles coming more rapidly also to maturity and withering more quickly, besides which the medullary layer increases. In observations made on rabbits it was found that the hypertrophic process had begun within two months after the operation, and that at three or four months it had nearly doubled the size of the remaining ovary. After the fifth month the remaining ovary became smaller again.—*The Lancet*, April 30, 1892, p. 991.

RETROFLEXION AND GASTRIC NEUROSES.

Panecki, of Danzic (*Der Frauenarzt*, May, 1892) is convinced that retroflexion of the uterus is in some cases the direct cause of several forms of gastric disturbances. He has closely examined fifteen cases where retroflexion existed in conjunction with dyspepsia, gastric catarrh, dilatation of the stomach, etc. In eight the gastric symptoms disappeared after satisfactory reposition of the uterus. In three no relation could be found between the uterine disease and some gastric neurosis. In four gastric disease was traced to some distinct local cause. When remedy of the retroflexion gives no relief from gastric symptoms, careful investigation is necessary to discover the true cause of the affection of the stomach.—*Brit. Med. Jour.*

PEDIATRICS.

THE USE OF HYPODERMATIC INJECTIONS IN CHILDREN.

In an excellent work, Legroux (*Jour. de Méd. et de Chir. Prat. Le Bulletin Médical*, April 22, 1892) gives the following *resumé* of the reasons favoring the employment of hypodermatic injections in children, notwithstanding the pain that such injections may and do produce: 1. The difficulty of administering the medicament on account of its bad taste, or the impossibility of giving it to children in the form of pills or *cachets*, as for example, the salts of quinine. 2, The great efficacy of absorption, as is found in regard to ergot and caffeine. 3. The rapidity of stimulation or of the analgesic effects produced upon the nervous system, as for instance, from the hypodermatic injections of ether, morphine, cocaine and antipyrine. 4. The changes that certain remedial agents undergo when introduced into the stomach, as for example, blood-serum of the dog. 5. The intolerance of the stomach to large doses of drugs like creasote. 6. The obstinacy of children, finally, in refusing to take all and every drug.

In the practice of the hypodermatic method, the greatest antiseptic precautions should be observed. The solutions used must be clear, the remedies pure, and the doses strictly accurate, in order to prevent the formation of local abscesses and the production of other deleterious effects. The hypodermatic injections of the following medicaments are indorsed by Legroux:

Chlorhydrate of quinine, in doses of 25 centigrammes, as in this formula:

℞ Chlorhydrate of quinine.....1 gramme
Distilled water.....4 grammes
M.—Each syringeful containes 25 centigrammes.

This injection has given excellent results in the treatment of pneumonias and broncho-pneumonias, and in that of intermittent and typhoid fevers of children. In order to obtain the best effects, the injection is to be repeated twice or thrice, according to the age of the patient.

Ergot, in the form of Yvon's solution, in doses of 1 gramme, or in that of Tanret's ergotine in doses of four or five drops, morning and evening. These injections have been of great service in cases of acute nephritis, accompanied with hæmaturia, in those of hæmaturia resulting as a sequela of scarlatinous nephritis. The injections are similarly indicated in cases of passive congestion of the lung; in those of slow-revolving pneumonias and broncho-pneumonias; and finally, in prolapse of the rectum, in nocturnal incontinence of urine, and in insufficient tonicity of the anal sphincter.

Neutral, pure ether, in doses of a half-syringeful, introduced deeply into the muscles, not under the skin, is useful in cases of slow-repairing gangrenous patches.

Caffeine in solution with benzoate of sodium, frequently employed in infectious diseases, is used in conditions of cardiac weakness or continuous adynamia, or when diuresis is desired. It may be given in doses of 25 centigrammes for each injection.

Antipyrine, in doses of 25 centigrammes, may be employed in cases of persisting vomiting or to produce a calming effect when pain is intense.

Creasote, in doses of from 2 to 6 cc., slowly injected, is well tolerated, produces little pain, and has been found quite useful in pulmonary tuberculosis. The injections of this drug have also given good results, as antiseptic and antithermic, in diphtheria. The results obtained in 68 patients suffering from this disorder, warrant the further employment of the drug.

HYGIENE.

ALKALI AND BACTERIA IN WATER.

M. Jean Rossi, in a thesis presented to the University of Geneva (1892), gives an account of experiments made with a view of ascertaining the influence of alkalinity on the number of colonies developing on gelatine plate cultivations of natural waters. The author very properly points out that numerical results are only strictly comparable when the plate cultures have been made with one and the same specimen of jelly. He broadly confirms the previous results of Reinsch, that the addition of sodium carbonate to the jelly in excess of that required to render the medium neutral leads to the development of a larger number of colonies, and he has also investigated the effect of adding other alkalies. The experiments may be thus summarized:

Additions to Beef Jelly.	Number of Colonies.			
	Carbonate of Soda.	Carbonate of Potash.	Caustic Soda.	Caustic Potash.
Per Cent.				
0. 0	72	72	72	72
0.05	133	60	30	73
0.10	73	67	0	25
0.15	62	53	0	0
0.20	55	47	0	0
0.50	39	6	0	0
1.50	0	0	0	0

It must not, however, be supposed that these figures have any absolute significance, depending, as they do, upon the particular forms of microbes which happened to be present in the waters experimented with. —*Brit. Med. Jour.*

THE DANGER OF CELLULOID BUTTONS.

Professor C. Vernon Boys of England, reports the case of a lady, standing near a bright fire, who suddenly found herself in smoke. A gentleman who came to her rescue succeeded in crushing the ignited portion of her dress, not, however, without severely burning his hands. On investigation the fire was found to have originated from a spot where a large fancy

button had been, but had disappeared. Similar buttons were subsequently examined, and were found to be highly inflammable, being made of celluloid.—*Annals Hygiene.*

MEDICAL CHEMISTRY.

A LABORATORY DEVICE.

Most practical chemists are painfully aware of the unsightly appearance of reagent bottles, caused by the drops of the solutions running down the outside and crystallizing thereon. This may be prevented by simply painting the rim with melted paraffin. Care should be taken to cover only the side of the lip—none should be put on the upper surface. This can be accomplished most easily by using a small hog-hair brush and a wax of low melting point, such as is used for embedding sections. It will be found that besides preventing the solution trickling down the outside, it enables one to deliver the reagent easily in single drops without resorting to the plan of one party withdrawing the stopper.—*Monthly Journal of Popular Science.*

A SIMPLIFIED METHOD OF MILK ANALYSIS.

E. Gottlieb recommends the following modification of B. Roese's method of milk analysis, which is expeditious and said to yield accurate results:

Into a cylinder of about 45 cm. high, and graduated in ½ cc., 10 gm. of milk are introduced. The weighing is done in a small flask, in which the adhering film of milk (after its being poured into the cylinder) is easily determined, since this film is practically uniform each time To the milk in the cylinder there are added, first, 1 cc. of 10-per-cent. ammonia (specific gravity 0.960), the mixture being shaken; next, 10 cc. of 95-per-cent. alcohol, the mixture again shaken; and finally 25 cc. of ether. The cylinder is now closed with a cork having a smooth, clean, and perfect face inside, and previously dampened with water so as not to absorb any of the liquid contained in the cylinder. On shaking the cylinder several times up and down the milk fat will readily dissolve in the ether. Next 15 cc. of petroleum benzine are added, the whole once more shaken, and the cylinder then set aside during at least six hours, so that the contents may separate in sharp layers, the upper one being a solution of the fat in the ether and benzine, the lower one a transparent, clear solution of casein and milk sugar, while the phosphates form a white sediment at the bottom. The volume of the upper layer is read off, and the largest portion of it transferred by a slender glass siphon into a small weighed flash. The ether and benzine are evaporated off at a gentle heat, the flash then heated during one or two hours in a drying oven at 100° C., cooled in a desiccator, and weighed.

The fat must be perfectly clear and free from the odor of benzine.

The weight of the fat found in the fraction of the ethereal solution siphoned off furnishes, by a simple calculation, the total amount of fat in the 10 gm. of milk. —*Landw. Versuchsst.*, vol. lx., 1.

NEWS AND MISCELLANY.

EXPERIMENTS ON LIVING ANIMALS.

The annual return of experiments on living animals, together with the report of the Inspector for the year 1891, has been presented to the House of Commons. This return, together with Dr. Poore's report, affords evidence that scientific researches in physiology, pathology, and pharmacology have been prosecuted with considerable earnestness during the past year. The total number of licensed places was 59, and of lincensees 153, while the total number of experiments was 2,661. Of these experiments, 986 were performed under the conditions of the license alone, or Certificate C, and were consequently painless, as the animal, under these conditions, is never allowed to recover from the anæsthetic, while 1,406 were merely inoculations or hypodermic injections, to which it is a misuse of terms to apply the word "vivisection." There thus remains only 269 experiment performed under the Certificate B, in which the animal, being anæsthetised during the operative procedure, is allowed to recover from the anæsthetic. In these cases the wounds are necessarily treated antiseptically, and everyone who has been under the surgeon's knife under similar conditions must know

that such wounds invariably heal without causing pain.

As regards the nature of the experiments, 784 were physiological, 1,457 were pathological, and 420 were therapeutical or pharmacological.

"The total number of experiments," continues Dr. Poore, "shows an increase upon last year. This is more than accounted for by the increased number of experiments under Certificate A, due to the demand for exact knowledge as to the mode of propagation, the prevention, and treatment of those diseases which are caused by living organisms. Under all the other certificates (except C) there has been a decrease in the number of experiments as compared with last year. Among the diseases, the causation of and the protection from which have occupied the attention of licensees during 1891, may be mentioned tubercle, cholera, cancer, erysipelas, diphtheria, influenza, rabies, glanders, distemper, 'black quarter,' 'black leg,' malignant œdema, swine fever, anthrax, necrosis of the liver in sheep, food poisoning, lead poisoning, goître, and cretinism. The physiological and therapeutical experiments have been of equal importance, and have included investigations on many of the most important functions of the body, and the mode of action of many drugs. During 1891 the licensees have, as usual, shown a most loyal regard for both the letter and the spirit of the Act. During the past year 131 visits of inspection have been made by Dr. Russell and myself, which have been severally reported with such details as was necessary."

Anyone not absolutely blinded by prejudice must admit that this report shows that the Vivisection Act is thoroughly fulfilling the object which Parliament had in view when it was passed. It was never intended to check experimental work, but merely to control it; and if the Act be worked fairly and liberally, it is conceivable that it may ensure a higher quality of work and greater thoroughness. The report at least affords evidence that the licensees are all of high scientific standing, and that all experiments are carried on in properly equipped laboratories. where the workers have the advice, and, if necessary, are subject to the control, of their seniors, and where there is every facility of making full and proper use of the labor expended on the work. The report also affords evidence that what the public is told with regard to the horrors of these experiments is mere exaggeration born of fanaticism.

The report can be bought of the Queen's printers for 3d., and we cordially recommend its perusal to all who are really anxious to get some insight into the merits of the question.—*Brit. Med. Jour.*

SUICIDE DURING PARTURITION.

Recently, a case occurred in Wigane England, where the woman, after some hours of labor, and upon the midwife telling her that it was necessary to have the aid of a medical man, owing to its breech presentation, while the husband went for the doctor, left the house, notwithstanding the protestations of the nurse, and when the doctor and husband returned she was nowhere to be found. The medical man waited some time while a search was made for her, and then left. Next morning her body was found in the canal with the newly-born infant. The shock produced by sudden immersion must have cause the uterus to expel its contents.—*Lancet.*

PREHISTORIC SYPHILIS,

The precise period of the world's history when syphilis became recognized as one of the diseases to which human flesh is heir has always been a matter of debate. But recent researches by Prokscy rather seem to indicate that the malady in question is of much earlier origin than has been generally supposed. This inquirer asserts that he had found in the papyri from the library of Sardanapalus, dating back seven hundred years B. C., proofs of the prevalence of syphilis among the Babylonians and Assyrians. In the legend of Idzdisher both his heroes were punished with a disease which affected the skin and generative organs. One of the heroes, after unnatural sexual connection, sickened and died. —*Med. Press.*

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Clinical Lectures.

PLEURISY WITH EFFUSION.

By J. M. ANDERS, M. D., PH. D.,

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Gentlemen:—The patient before you is a painter; age 40; single; born in United States. The resident physician, Dr. Hunter, has obtained the following notes of his case and previous history: The mother died of throat consumption at the age of 70; father is still living and well. Three sisters have died of phthisis, at 26, 36 and 35 years respectively; one brother died of phthisis at 48 years of age. There is no other hereditary disease in the family. The patient has always enjoyed good health until the onset of present illness, which occurred about January 1st, 1892. The first symptoms were those of la grippe, viz: cough, aching of the bones, slight febrile movement. After 10 days he developed such symptoms as stitch-like pain in the left axillary region, dyspnœa, with catching respiration and at the same time there was a slight increase of temperature. The physical signs of pleural effusion were noted by the physician in attendance at that time. The cough was hard and harassing, with very slight expectoration. He was confined to bed for 6 weeks from the date of onset. Since he left his bed, 4 weeks ago, the cough has gradually diminished, while he has gained 4 pounds in weight. He still has slight cough, slight pain on deep respiration and moderate dyspnœa on exertion. He has never had night sweats.

One week ago, we noted the following physical signs: on inspection, the lower half of the left chest was observed to be somewhat retracted posteriorly. The expansile movements were slightly increased on the right side and over the upper portion of the left. Over the lower half of the left side the movements were very slight indeed. No retraction was noted anteriorly, or in the left axillary region; only posteriorly.

On palpation, the vocal fremitus was found to be normal on the right side and over upper two-thirds of left side posteriorly. Anteriorly, vocal fremitus slightly exaggerated over upper portion of left side, whilst over lower lobe of same side laterally and posteriorly, almost totally absent.

Percussion resonance everywhere slightly exaggerated except over lower portion of left side, where there was dullness even to flatness. The vesicular murmur was also slightly exaggerated over whole of right side and upper portion of left. Over lower portion of left side posteriorly and laterally, very feeble respiratory murmur was heard and at the extreme base, none at all. A pleuritic friction and creaking sound was heard in mid-axillary region. Near the base posteriorly, we heard crepitating friction sounds.

But, gentlemen, the one physical sign which is of infinitely more value than all those before mentioned combined, is the change in the upper limit of dullness on change of position of the patient. Whenever this is noted, we may be certain that the pleural cavity contains fluid. So soon as this fact was made out in the case before you, we confirmed the diagnosis of liquid effusion by the use of the hypodermic needle, by means of which we withdrew a small amount of straw colored fluid. The patient was treated by the use,

internally, of the so-called iodides, as per the following recipe:

℞ Potassii iodidi.....gr. v.
Syr. ferri iodidi.....m. x.
Syr. sarsap. comp. q. s. ad.....5i.
M. Sig. 5i q. d.

He returns to-day feeling rather better than when he presented himself for treatment one week ago. On making a careful physical examination of the left chest, it was found this morning that the amount of effusion had, within the past week, diminished to a noticeable extent, as the result, probably, of the treatment instituted one week since.

I had informed the man, after examining him for the first time, that in case the liquid effusion did not subside in the course of one week, I would resort to aspiration. However, since there has been considerable subsidence of the upper boundary line of dullness, it would not be the part of wisdom to interfere in this mechanical manner. His general condition is apparently very good; he has not had, for several weeks, any marked rise of temperature, indeed, as often as the temperature has been taken during this period, it has been found to be under 100° F. whilst to-day it is only 99° F. The cough has almost entirely disappeared and the dyspnœa is also less marked on exertion. In view of the fact that he has steadily improved since he came under our care, we will continue the double iodides for at least two weeks longer. His diet shall be generous; he shall take a moderate amount of exercise in the open air and shall avoid exposure to wet and cold, and shall take a moderate amount of alcoholic stimulants in the form of milk punches.

Gentlemen, the history of this case represents several features of considerable interest. You may recollect that he gives the history of a well marked hereditary predisposition to tuberculosis, his mother, three sisters and a brother having died of the latter disease. Whilst the etiology of sero-fibrinous pleurisy is not very well understood as yet, there is a large number of competent observers who contend that in the vast majority of instances, this disease is secondary in the course of tuberculosis. I myself am of the opinion that pleurisy is very rarely a primary affection, and that it is more frequently a secondary process in chronic tuberculosis than in any other disease, though I cannot go so far as many French writers, who contend that all pleurisies are tubercular. It is not to be inferred that pleurisy is non-tubercular in nature when gross lesions cannot be demonstrated in the lungs, since it has frequently been found that a very small tubercular infiltration of the pulmonary tissue has been followed by active inflammation of the pleura, indeed, we have no means of eliminating phthisis as a causal factor in cases of pleurisy. This is also shown by the fact that sero-fibrinous and plastic pleurisy are often the first step in tuberculosis. Here it is quite probable that the tubercular process is the primary one, it having merely been overlooked. We must, at all events, concede the fact that tuberculosis predisposes markedly to inflammation of the pleura and that the case under consideration is no exception to this law. Among children, pleurisy, according to my own observation, is less frequently tuberculosis in nature than among adults, though it much more frequently follows pneumonia.

I have just learned, a few moments prior to bringing this patient before you, that he is addicted to the immoderate use of alcoholic stimulants, and has been for many years. I mention the fact in this connection, for the reason that I sincerely believe that chronic alcoholics are very prone to suffer from attacks of pleurisy. You will not find chronic alcoholism put down in most of your text books as a causative factor in this disease, but I am convinced that a little careful observation will lead you to a similar conclusion.

We found that this patient suffered from influenza for ten days prior to the development of the pleurisy. Pleurisy, it should be recollected, occurs quite commonly in the course of all acute infectious maladies, and this is especially true of influenza. Every medical practitioner who enjoys a large clientele, must have observed, during the epidemic through which we have just passed, many instances in which pleurisy developed either in the course of, or subsequently to, cases of influenza. Influenza is to be looked upon, however, rather as a predisposing, than as an exciting cause of the disease. There is nothing in this man's history that would throw light upon the question of the immediate or exciting cause of the disease. Pleurisy may very frequently be traced to exposure to wet and cold, as well as to injuries to the chest wall.

The diagnosis of sero-fibrinous pleurisy is not difficult when the amount of effusion is large. Considerable difficulty is, however, presented when the effusion is small in amount or confined to limited areas on account of adhesions. So far as the subjective symptoms are concerned, it should be especially noted that they do not stand in any sense in direct relation to the extent of the effusion. I have frequently seen cases in which the amount of effusion was large, whilst there was almost entire absence of such symptoms as pain, cough or dyspnœa; the symptom, pain, is especially misleading. On the other hand, cases often present marked subjective symptoms, notwithstanding the entire absence of liquid exudation, to be very carefully noted, since they are occasionally of value when we come to discriminate between this disease and acute lobar pneumonia. Under these circumstances, the physical signs do not betray very clearly, under certain conditions, the true nature of the morbid process within the chest. As a rule, however, the physical signs are quite diagnostic of pleurisy with effusion. This is particularly true, as before stated, when the amount is copious. Here, the well known signs, viz., restricted expansile movement on inspiration, bulging, the absence of vocal fremitus on palpation, the flatness on percussion, the absence of or greatly enfeebled vesicular murmur, together with diffused bronchial breathing over the upper portion of the effusion, usually suffice to make a positive diagnosis. In the patient before you, when first seen, the amount of effusion was small, and it is under these circumstances that errors are frequently committed, simply through lack of due precaution in carrying out the well recognized methods of exploration, rather than from lack of skill. Had I discontinued my examination, of this case before ascertaining whether the upper boundary line of dullness shifted with charge in the position of the patient, I should have made an incorrect diagnosis, for, up to this moment, I was of opinion that we had to deal with a thickened and adherent pleura simply. Having found, however, that the upper line of dullness changed on changing the position of the patient, I was obliged to make the diagnosis of pleurisy with slight effusion. Too much stress cannot be laid upon the importance of applying this crucial test in cases in which the effusion is slight. It may not always be possible to make it even though a certain amount of liquid be present, more particularly if that should be sacculated. Under these circumstances, before concluding that no effusion is present, I would advise you to resort to the use of the hypodermic needle, which, if employed under antiseptic precautions, can, in the first place, do no harm, and will very frequently discover for you the presence of effusion, a condition of things that would otherwise be frequently overlooked. It is owing to the fact that the recognition of effusions however slight is of the utmost importance when we come to treatment of this affection, that I have placed so much emphasis upon this point in diagnosis.

I cannot to-day take up the subject of the differential diagnosis of this disease. I should like to call your attention to a few practical suggestions in connection with the treatment of this common complaint. In approaching the question of the management of this disease, it is all important to bear in mind that the effusion is the result, primarily, of an inflammatory process and is not a mere transudation. That inflammatory process is, within certain limits, self limited, most probably. If this be true, then one of the aims of the physician should be to limit the extent of, as well as the intensity of, the inflammation, by this means also limiting the amount of effusion. With a view of combatting the inflammation, we employ external as well as internal means. Locally, the use of counter irritants, such as mustard plasters, iodine, etc., are of value. Internally, there is perhaps no other remedy that fulfills so many indications as quinine; it should be given in doses of four grains every four hours. I would strongly advise against the use of internal antipyretics in the treatment of this disease, more particularly such as antifebrin, antipyrin and phenacetin. We are not certain of our ground as to whether, in this complaint, there is a toxic agent circulating in the blood and exerting a poisonous effect upon the heart, its ganglia and the nerve centers, but we do know that the heart is very much embarrassed on account of the liquid effusion displacing it and compressing the great vessels near it, and we do know further, that the blood pressure in this disease is usually quite low, as shown by the

small amount of urine secreted daily; hence, to depress still further the center of circulation, is not only uncalled for, but positively injurious. My reason for saying that internal antipyretics are not called for in this disease, is that the temperature is rarely above 103° F, and can be sufficiently lowered in a safer manner by the use of cold sponging of the surface and the use, internally, of quinine. Neither would I recommend the use of any of the arterial sedatives, for the reason that they too, in every instance, depress the circulation whilst relaxing the blood vessel walls and lowering arterial tension,—the very things that are to be scrupulously avoided in this disease. Another leading indication in the treatment of pleurisy has for its object the removal of the effusion. This may, in a great many instances, be left to nature herself. It is questioned, by some authorities, whether we can, by the use internally, of medicinal agents, stimulate absorption of the effusion, and whilst time will not permit me to enter into a discussion of this mooted question, I desire to state it as my honest opinion, that much can be done in this direction. I would advise especially, that you make trial of the mixture already rehearsed in your hearing. This has been employed by myself in not less than thirty cases, with apparent success; at all events, in nearly every instance in which the double iodides have been used, thoracentesis has been unnecessary.

The fluid should be withdrawn by mechanical means at any time during the course of a case of pleurisy when dyspnœa becomes urgent; when there is a tendency to syncope; when lividity of the eyes, lips and finger tips become marked, no matter how high the temperature. But unless the indications during the febrile stage are urgent, unless demanded on account of threatened asphyxia or syncope, it had better not be done, for the reason that when performed during the active inflammatory stage of the affection, there is apt to be a rapid return of the effusion. It is often a difficult question to decide how soon to aspirate after the temperature has declined to the normal or to a point near the normal, especially when there has been no noticeable diminution in the amount of effusion present. Under these circumstances, the leading indication is to get rid of the fluid, and if you have persisted in your efforts to assist nature to absorb this fluid by the exhibition of remedies recommended for this purpose, during the entire course of the febrile stage and for one week subsequently, then I would advise you not to delay the operation of thoracentesis any longer. At your first operation, remove but a small portion of the effusion, at the same time continuing the use, internally, of the double iodides previously recommended. If, however at the end of another two or three days, no tendency is shown on the part of the effusion to subside, then a second aspiration should be done. The necessity for the removal of a large amount of effusion at any one time rarely exists, and the dangers that attend such a procedure are several, among the most serious being albuminoid expectoration and syncope, which are ofttimes almost immediately fatal, whereas the removal of a small portion of the effusion (say from 8 to 12 ounces) can do no harm if carried out under antiseptic precautions, no matter how frequently repeated. Again, frequently have I seen a single operation at which a small amount of the effusion was removed, suffice. More frequently perhaps, a second aspiration was required.

TREATMENT OF TORTICOLLIS BY THE HYPODERMATIC INJECTIONS OF ATROPINE.

Leszinsky (*Revue de Therapeutique Medico-Chiurgicale*, 1891) has published a case of muscular torticollis, which was successfully treated by hypodermatic injections of atropine. The patient was a painter, 37 years old, in whom the affection developed without appreciable cause, perhaps under the influence of lead intoxication. The contractions were exaggerated by the movements of mastication, by the closing of the jaw, and even awakened the patient from sleep. Near the right angle of the mouth there was a point of complete anæsthesia. After having used various internal remedies and electricity without effect, the author made injections of atropine, beginning with $\frac{1}{100}$ of a grain and increasing gradually to $\frac{1}{75}$. The cure was complete after eight injections. The author mentions a case of convulsive *tic* in a woman of fifty years, in which similar injections produced decided amelioration.—*Univ. Med. Mag.*

Communications.

SURGICAL INTERFERENCE IN CEREBRAL DISEASES OF CHILDREN.

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It is the object of this paper to consider the advance made in the pathology and surgical treatment of the cerebral diseases of childood. It is not deemed necessary to recite the history of this progress, nor to enter largely into the discussion of the theories upon which much of the modern surgical interference is founded. There can be no question as to the advisability of interference by surgical means, when the known pathological conditions are such as to warrant the hope for improvement. But gross theoretical speculations, as to the pathology, such as have been advanced relative to microcephalus are not scientific aud are not sufficient to permit of operative procedure. Starr has aptly said, that the solution of the problem of operative treatment in cerebral diseases of childhood must be based upon these conditions: *First,* the pathology of the cases, and *secondly,* upon the results of experience when such operations have been done. The pathology of affections peculiar to childhood, has not received the study it deserves by operators and others advocating surgical interference; especially does this apply to microcephalus, the relief of which, by linear craniotomy, is now being strenuously advocated by surgeons on both sides of the Atlantic. While Lannelongue has modified the original theory, that advocated by Virchow, viz., that microcephalus was due to premature synostosis, by saying that the condition is due to maldevelopment in the cranium, and is secondary, yet, he persists in doing the operation, hoping thereby to stimulate brain growth. Microcephalus is a true pathological condition having intra-uterine arrestments of development as a cause. Whether disease of the fœtus, or nutritive changes from other causes, are primary in producing this result, we are unable to say. There is deficiency of structure as well as malformation of the brain, and synostosis is not a factor in producing this narrowing of the brain in all its diameters.

Concomitant as it is in almost all cases, yet microcephalus may exist without it. Down, of London, reports cases of microcephalus where the sutures were not closed, even the medio-frontal suture which is ossified during the first year of life, was open. He says, "In my own observation of the crania of two hundred idiots, the arrest of development was not the result premature ossification of the sutures." He further says, in speaking of one particular case, "I am desirous of placing on record this extreme degree of microcephalus, without any synostosis, as a striking example, in which other than mere mechanical causes, must be looked for as productive of this and analogus cases."

Shuttleworth, after reporting a similar case, says, "I am inclined to think that the premature synostosis is as a rule the consequence rather than the cause of imperfect brain development, and that the arrest of growth is about the sixth month of gestation."

Fletcher Beach supports this view; so also does Ireland, who says in many microcephalic heads the fontanelles are open and the sutures not united.

To Wilmarth we are indebted for much of the advancement made in the pathology of idiocy; he in his extensive autopsies has found but one case where any brain compression existed, while in most cases the convolutions were full and rounded. In a private letter to me he says, "There is very little evidence that microcephalic brains result from compression from the skull, but on the contrary there seems to be in nearly all cases an extra amount of subarachnoid fluid, with no flattening of the convolutions, or other indications of intra-cranial pressure, as if the skull had grown slightly beyond the brain. If the conditions arose from cranial pressure, all portions of the brain should suffer alike, as the brain may be regarded as fluid, so far as transmission of pressure is concerned. I agree with you that the defective growth is more often due to nutritive faults, which we do not at present understand."

My own studies based on anatomy, embryology, pathology and clinical obser-

*Read before the Section of Neurology and Medical Jurisprudence of American Medical Association, June 8th, 1892.

vation have convinced me that in microcephalus we have to deal with conditions not amenable to treatment by surgical means. Anatomically speaking we recognize that intellectual development depends, as Meynert says. on the uniform structure of all parts of the brain. In microcephalus, we find absence of critical structure, necessary to normal mental development, and that the degree of idiocy is not dependent so much upon the degree of microcephalus, as upon the amount of structural deficiency. The smallness of the skull is no criterion of intelligence in these defectives. The structural deficiency is shown in effacement and interruption of convolutions, the simple and defective arrangement of fissures, the absence of the central portions of the brain, and atrophy of the lobes, especially the frontal and occipital. Microscopical examination shows diminution in number and absence of ganglionic cells in certain layers and deficiency of nerve fibres.

Embryology teaches us that the brain is developed early, but that it is not until near the fourth month the most important portions are shown, then it is the frontal, occipital, parietal and temporal lobes can be distinguished and the primary fissures are pronounced. The secondary fissures appear between the fifth and sixth months; the occipital lobe should cover the cerebellum at the sixth month, according to Beaunis and Bouchard. In the seventh month nearly all of the main foldings of the hemisphere come into view, the frontal lobe elongates, the sylvian fissure narrows to a cleft. In view of these established facts we conclude from observation of the brains of microcephalics, which in so many cases show evidences of arrestment, before the evolutionary processes above stated are completed, that arrest of development occurs at, or near the sixth month of gestation. An embryological study of the process of ossification does not sustain the theory that synostosis is the cause of microcephalus.

Embryology, shows that the vault of the skull is formed in membrane and the base in cartilage, and pathology often makes the distinction more manifest (McClellan), which it does in microcephalus; the ossification in the base is well advanced at birth, and the vertex may or may not, be completely ossified, according to the precocity of the osseous system, "existing without any correlation between the growth of the brain and skull." Wilmarth says, "I am convinced that in the majority of cases the skull does not grow simply because the brain does not." My own observation is that skull growth is dependent upon brain growth only to the extent of localized nutritive interference, which while it may affect both brain and skull, does not necessarily do so as evidenced in synostosis and also in open fontanelles in microcephalus. We conclude that synostosis is the result of arrested brain development, without interference with the process of ossification. The results of experience when the operation of linear craniotomy has been performed, do not sustain the claims made for it, by Lannelongue and his followers. Statistics of operations performed, which I have been able to gather, show such meagre results and such great mortality both in this country and Europe, that it seems to me folly to continue to advocate linear craniotomy. Those who have survived the operation have in some instances, improved but there is no evidence to show that such improvement would not have taken place by as persistent efforts in training before the operation as after. Time, that important element which should be taken into consideration in estimating the results of linear craniotomy, has been lost sight of in the haste to report the operation. The efforts put forth to elicit improvement, and the attention given the child by the parents and all interested in the case would even in the most profound case of feeble-mindedness, have some noticeable mental improvement as a result. Those who are familiar with the training of feeble-minded children, have found no encouragement in the operation and one after another have assured me they have little "sympathy with that kind of surgery."

Persistent physiological education such as is to be had in thoroughly equipped institutions can accomplish more without linear craniotomy as an adjuvant.

The treatment of epilepsy has received much attention during the past year, both by surgeons and neurologists, and while our knowledge of the pathology of this disease, is still very obscure, we have advanced appreciably, as to the value of surgical interference.

All who are familiar with epilepsy are aware of the persistency of the attacks in

spite of all treatment, and how comparatively few cases are cured, clinical reports to the contrary notwithstanding. In a paper read before the Illinois State Medical Society last year, on epilepsy, I said, "All we do generally in the treatment of this disease is to render less frequent and less severe attacks; the removal of peripheral irritation makes the case more hopeful, but statistics are not encouraging as to the complete recovery, probably due to the establishment of the epileptic habit, which is due to the adjacent brain centers having become irritable and unstable." These statements were severely criticized, my prognosis was said to be too gloomy, and the outlook for epilepsy too discouraging.

Another year's observation and study only confirms my belief more strongly, for epilepsy is, as yet, a Gordian knot for the neurologist and surgeon to untie. Gray, Sachs, Ferrier, Dana, Wilmarth, and other authorities have contributed to the literature of epilepsy clinical observations which sustain my humble opinion. Surgical interference is justifiable and should be advocated in all cases of traumatic or organic epilepsy, providing sclerosis is not too far advanced.

In focal epilepsy we cannot predict the results following excision of the localized seat of irritation, *first*, because conditions more severe than the epilepsy itself may follow removal of the cortical substance: and, *second*, we cannot give assurance of the cessation of the spasms. I have in mind a case to which the first statement applies; a boy, an epileptic; trephined, and portion of cortex removed, the epilepsy ceased, but the boy became an imbecile, and is now an inmate of an Institution for Feeble-Minded Children. My second statement is illustrated by another case, a boy; trephined, epilepsy still continues; fits are more severe, and this boy has since been admitted to a Feeble-Minded Institution. We must not overlook the fact, that injuries comparatively slight and which would do little if any damage to the brain of an adult, in a child produce disastrous effects, and diffuse sclerosis results. Wilmarth, in his autopsies, has repeatedly demonstrated this fact, and while associated with him I had this so impressed upon me, that I am loth to advise trephining in the epilepsies of childhood, unless taken very early in the history of the case, and even then we cannot offer much hope, for as Wilmarth says of his cases, "My post-mortem studies have led me to believe that while considerable injury may be inflicted on the adult brain with no great impairment of the mind resulting, the contrary holds in the child and brain injury from accident or disease is sure to permanently impair mental growth." Osler, likewise pointed out to me during his study of the cerebral palsies of childhood, the very diffuse formation of blocks of sclerosis and the improbability of surgical relief.

In his book, he says, "There are several circumstances which militate against the probable success of operations of this kind. When sclerosis exists the area is usually too large for removal, and it is only in exceptional instances we could expect the epilepsy to be relieved. I do not think that in any of the cases which I have reviewed, the anatomical condition offered the slightest possibility of relief from interference."

What then is to be the future of surgical interference in the epilepsy of childhood? We must be guided by the nature of the case; often no doubt we can by operating arrest the progress of the disease, perhaps cure it. Further, as Sachs says, in the cerebral palsies of childhood, the paralysis which so often precedes the epilepsy will be the guide for operative procedure by localizing the irritation; the centres should be exposed and be treated in accordance with the special indications of the case. He is confident that if these cases of infantile cerebral palsies are more generally recognized, and if we succeed in checking the tendency to epilepsy in them, the total number of epileptics will be notably diminished.

Operative interference in cases of defective sensory perception, as presented by Starr, in a recent paper on "Cerebral Atrophies of Childhood," seems to me to open up a field for observation for the neurologist, one promising some benefit in preventing, or at least ameliorating the condition of that great class of defectives, the blind, and the deaf and dumb. We all know that many, many of these cases, especially of the deaf and dumb, owe their trouble to cerebral diseases—diseases which medical treatment has failed to relieve, and we cannot but hope that surgery may ultimately find a way to benefit this unfortu-

nate class. Deaf-mutism is little understood and less studied by the neurologist, in fact a thorough ætiological study of this prevalent condition from the standpoint of neuro-pathology has not been scientifically undertaken.

Through the kindness of Dr. Gillett, Supt. of the Illinois Institution for the Deaf and Dumb, the largest institution of its kind in the world, I have commenced the study of deaf-mutism and hope to report my progress at the next meeting of this Association.

In conclusion, I would say surgery has its field of usefulness in cerebral diseases of childhood, but is limited by the pathology and the degree of success following operations. To scientifically recommend surgical interference, we must be sure of our diagnosis, and permit of extreme limits in our prognosis.

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EFFECTS OF AN OVERDOSE OF CODEINE.

An overdose of codeine is not a common occurrence, and therefore Dr. Mettenheimer, who has met with such a case, has reported it. An elderly lady consulted him for a slight catarrhal, nonfebrile affection which, however, gave rise to a troublesome, spasmodic form of cough. For this he prescribed 0.03 gramme (about half a grain) of phosphate of codeine, in the form of a pill, to be taken every three hours. The patient, however, swallowed four of these pills, or about a grain and a half of the codeine salt, at once. Shortly afterwards she vomited twice and suffered from abdominal pain. There was, too, suppression of urine and she felt very ill, being sleepy but unable to go to sleep. The next day she was still drowsy and had no appetite but there was no return of the sickness. She was then seen by Dr. Mettenheimer, who found the pupils contracted, the pulse hard and quick, and the respiration accelerated. The cough had entirely disappeared. The contracted state of the pupils, the loss of appetite, and the abdominal pain persisted for several days. No urine was passed until thirty-six hours after the pills were taken. On the third day the drowsiness had passed away. The cough did not return for a week and when it did it was comparatively slight. This case seems to show that codeine in large doses has a very similar effect to opium and that it may prove a most efficient remedy for some kinds of cough. As the tongue remained clean it would appear that the vomiting was due to cerebral, rather than to gastric, irritation.—*Lancet.*

TYPHO-MALARIAL FEVER SO-CALLED.

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In presenting this paper I shall claim no originality, nor attempt to produce anything new. The nomenclature of this disease is quite varied. Wood calls it "entero-miasmatic;" Drake gives it the name of "remitto-typhus;" Loomis calls it "continued malarial fever," and Woodward gave it the name "typho-malaria" by which it is best known through the Southern States. I believe that all of the above appellations are erroneous and misleading.

During the four years of my professional life it has been my good fortune to meet with and treat at least ninety cases of this fever that could easily be excluded from all other well recognized diseases. All of these cases were well developed, presenting well marked symptoms characteristic of this, so-called "typho-malarial fever." Doubtful cases were omitted. I shall give only the leading symptoms of this disease as I observed them, for I hope not to bore you by presenting facts with which the greater majority of this Association are already so well acquainted.

My experience with this disease leads me to believe: (1) That this fever occurs most frequently in the last month of summer and in the three fall months.

2. It occurs usually in the young and middle aged, very rarely in the aged.

3. The disease is very rarely found among the African race.

Symptoms.—The patient usually complains for a few days of being weak and of his head or back aching. Then perhaps he will have a chilly sensation with high fever following. The temperature course reaches its maximum, most usually, the first or second day. Then it will drop perhaps a degree or two and continue at this stage for from two to five weeks, I have had a few cases that had fever for six weeks. The pulse and temperature usually preserve a normal ratio. Sometimes we have diarrhœa, but most generally constipation. When diarrhœa occurs it is easily controlled by judicious treatment. There is nothing especially characteristic about the stools as observed without the microscope. Occasionally we have a case with a little tympanites. No tenderness nor the characteristic gurgling of typhoid in the right iliac region. No rose colored spots. The urine is always scant and usually high colored, but not turbid. It was not tested by the microscope. The middle and back part of the tongue is usually coated by a light fur, sometimes there is a yellowish white coating. The papilla of the tongue is almost always very prominent, its tip red and strawberry-like. Sometimes edges red. Often it is considerably pointed, at others quite flat and flabby. No sordes on the teeth; gastric disturbances usually occurred in children, not so frequent in adults. When delirium occurs it is most usually during the first few days when the fever is highest. Occasionally we have hepatic tenderness and vomiting of bile. No subsultus tendinum. The only special symptom after the first two or three days of which the patient complains is that of a general feeling of exhaustion, as if they were "completely worked down." It is not often that they complained of inability to sleep and rest at night. This is very striking in the great majority of cases; sometimes it is the reverse. Out of ninety cases I lost two; one died from hæmorrhage of the bowels, the other from heart failure. My treatment is generally expectant. I know of no specific, nor any regular course of treatment like we have in malaria and typhoid. I usually open the bowels with a small dose of calomel followed by a gentle laxative. In my first experience with this fever, I pushed quinine, thinking that it was of malarial origin, but without effect. I have never been able to attribute any good results to this drug in treating this disease. Nitro-muriatic acid is a great favorite with me in treating such cases, it aids digestion and assimilation. Sometimes if a dry tongue and tympany develop I give turpentine emulsion. My experience with this disease is that we must guard against heart failure. There is almost always a great "prostration of muscular strength." Even in the mildest cases it is some weeks before the patient regains his former strength and power. The muscles of the lower extremities seem to be especially affected in this fever. To see a patient

*Read before Tennessee State Medical Society, April 1892.

when recovering attempting to walk reminds me of that muscular prostration following diphtheria. For the cardiac weakness, I sometimes use digitalis, oftener during my former experience than during the last year. As Dr. H. C. Wood states, so I believe, that in a great majority of cases it "impairs the irritability of the sensory and motor nerves and muscular fibre, and interferes with reflex actions, efffects that cannot fail to retard nutrition."

When I find the capillary circulation slow, the pulse very fast and weak, and other symptoms "evincing depression of the excito-motory nervous centres," I generally give strychnia. Alcoholic stimulants are also used with splendid effects in such cases. I have now given the most prominent symptoms of, and my general course of treatment in, the so-called typho-malarial fever. The symptoms of this fever, as I observed them, clearly simulate the description of the so-called mountain fever of Colorado, given by L. Hubers M. D., of Rockyford, Colorado, in *The Medical News* of September 20, 1890. I believe the two fevers are produced from the same poison, the apparent difference being due to climate, altitude, etc. In speaking of this fever he says: "I am quite certain that I first observed cases of the so-called mountain fever in the Arkansas River valley in Western Kansas. There it was not known by the above appellation, nethertheless, several years' experience with the disease convinces me of its identity with 'mountain fever.' Dr. Huber does not tell us what this fever was called in Western Kansas, but from his description I understand that it was the so-called typho-malarial fever.

My principal object, as stated above, in preparing this paper is, that I desire to state my lack of faith in all former theories of this disease, with one exception. The theories as presented to the profession heretofore are about as follows:

1. That it is a hybrid disease.
2. That this so-called typho-malarial is a mild manifestation of typhoid.
3. That it is a combination of both the typhoid and malarial poisons.
4. That it is "a distinct type of specific fever."

In answering the first theory it hardly becomes necessary to state that we have no such thing as a hybrid disease. No really scientific investigator has ever come to such an irrational conclusion. All standard authorities assume that it is no hybrid; neither do I believe this to be a mild form of typhoid. All who take this view have so far furnished us with but little proof to substantiate their position; their arguments are by no means complete or convincing. It has been more of the nature of assumption than proof. They have not attempted to prove their affirmation by bacteriological investigations, nor from the pathological anatomy in such cases. Even the eminent Loomis (Practice of Medicine) in his concluding remarks on the morbid anatomy of this disease, says: "While therefore no pathological lesions which can be regarded a characteristic of this type of fever are found, and while the lesions very closely resemble those of typhoid fever on the one hand and remittent fever on the other, still there are differences which are sufficient to distinguish it from both and to stamp it as a distinct type of fever. By far the ablest plea for its being a mild type of typhoid was presented in the *Medical News*, of June 12, 1890, by Dr. W. W. Johnson, of Washington City. He seems to take it for granted that it is the result of the typhoid poison, and fights for his theory on the defensive order in endeavoring to exclude the malarial poison. He says in his argument for the exclusion of the latter poison, "The strongest arguments for the theory of the two diseases in one individual, are the presence of supposed well defined malarial symptoms in typical enteric fevers, and the beneficent effects of quinine in such cases. "To the first of these arguments it may be answered that the occurrence of chills in the onset or during the course of enteric fever, marked remissions in the fever curve, gastric irritability, the vomiting of bile, icterus and hepatic tenderness, are not necessarily due to malarial infection, and may and do occur in the course of the enteric fever of localities where malaria is unknown."

To the second argument, I will state that in my experience quinine has had no control over this disease whatever. It has not influenced the course or duration of a single case, to my knowledge. Dr. Johnson says that the symptoms so closely simulating those produced by the malarial virus are not necessarily due to this poison, for the reason that such conditions are

present in diseases where we know there is no malaria present, why not put the typhoid virus to the same test for exclusion in this disease. Do we not often find in many other diseases symptoms simulating those of typhoid fever where we have every reason to know that the specific virus is absent?

There is rarely the distinct pathological lesion of typhoid, neither is there anything characteristic about the stools from a bacteriological nor pathological investigation. Then why do so many of the profession continue to call this modified typhoid when they have so little grounds for so doing.

The third position I believe to be as fallacious as the other two. It is hardly reasonable to suppose that we have a mild form of fever produced by the preying upon the system of two distinct poisons. At the same time, I think that we have clearly proven that there is at least room for skepticism in regard to the presence of the typhoid virus in this disease, even from the confession of those who believe it to exist, and we think it just as unreasonable to claim the presence of the malarial germ as that of the typhoid poison; however, I believe the larger majority of textbooks take the position that in this fever we have the malarial agency; and that it is really "modified malarial fever" instead of "modified typhoid fever." Dr. Bartholow does not think this a distinct type of fever, simply typhoid complicated by malarial poison. Dr. Sam. M. Bemiss, of New Orleans, in Pepper's System of Medicine, vol. 1, page 614, in speaking of this fever says: "The prefix *typho* is properly applicable to a class of malarial fevers which are complicated by the specific poison which produces typhoid fever," and that the term (typho-malarial) should be so restricted as to define a disease compounded of the two pathological factors which, when acting separately, produce either typhoid or malarial fever." We think this is a definition calculated to mislead. Dr. Bemiss does not bring forth any very convincing proof to show either the presence of malaria or typhoid. He seems to take it for granted that "these things are so."

The presence of malaria is not evinced from the pathology of the disease so far as I have been able to ascertain. The effects of the anti-malarial treatment as advised by most authors does not go to prove that the malarial virus is present.

We believe that our authors of the present day too often receive the tradition of our forefathers and jump at conclusions in regard to the ætiology of this disease. They take too much for granted and are too easily convinced of the presence of certain poisons merely from physical signs. To show you the truth of the above assertion, I wish to make a quotation from the clinical lectures of Dr. Nathan S. Davis in his lecture on "Continued Fever." In presenting to his class a certain case of fever, he states: "The early history of the case (a chill followed by a paroxysm of fever) together with the existing paleness of skin and exacerbating character of the febrile phenomena *show the existence* of a malarial influence."

Is this proof sufficient to convince a thinking mind that the malarial parasite was in the blood of this patient beyond any question? Might not some septic poison produce the same symptoms.

In diagnosing for a tuberculosis are we content with simply the physical signs? Do we not search for the tubercle bacilli, the morbid anatomy and other corroborating conditions? In answer to a query in regard to typho-malaria," Dr. H. Toulmin, of the John Hopkins Hospital says, in regard to the two diseases being blended together, "that malarial fever and typhoid fever are entirely and perfectly distinct and are never found in combination . . . . We always examine the blood for Laveran's organisms, and test the urine for Erlich's typhoid reaction, which we consider of much value."

We might add that this is the verdict of the best authors from their most recent investigation.

If it be true that we have a modified form of either malaria or typhoid the one by the other, I would like to ask a few questions under the light of Laveran's discovery, pointing to the possibilities of a wonderful revolution in the treatment of malaria and typhoid.

1. If both the malarial parasite and the typhoid virus exist in these cases, why have they not been found in the blood of those persons thus affected? Laveran claims that, "the malarial parasite has never been found in the blood of those not affected with malarial poison." Again, the same investigator says: "The salts of qui-

nine cause the parasite to disappear from the blood, and this takes place synchronously with the cessation of the fever."

We found that in the above ninety enumerated cases that the salts of quinine did not have this effect in a single case, therefore we are forced to conclude that the malarial parasite was absent.

Dr. Osler states that "The characteristic changes in malaria are as distinctly determined in the blood as are those of tuberculosis of the lung in the sputa."

Dr. George Dock, of Galveston, Texas, has made some very interesting investigations along this line corroborative of Osler's statement.

2. If the malarial parasite modifies the action of the typhoid poison why not convert a specific typhoid into a so-called typho-malaria by injecting into the blood of the typhoid patient the malarial parasite. By this means we would lessen the mortality. It seems to me that this would be easily accomplished if the theory be true for the great Laveran again asserts that "malarial disease has been transmitted from one person to another by injecting into the veins of a non-malaria individual a small quantity of blood containing the parasite."

In regard to the fourth theory, that it is a distinct type of specific fever, I am well convinced that this will be the final conclusion of all true pathologists and bacteriologists.

Dr. J. S. Cain, of Nashville, Tennessee, in the last December number of The Southern Practitioner, was the first to boldly advocate the specific nature of this disease. He says: "That it is a distinct type of specific fever bearing no relationship to typhoid and no similarity further than its continuousness and none whatever to malarial fever." He believes that it is produced by a septic agency. Be this as it may, for a final solution of this question we *await* the future developements of the microscopist.

TO RELIEVE HEADACHE.

Weiss (*Prager med. Wochenschr.*, No. 15, 1892, p. 159) has observed that temporary relief from headache could invariably be afforded by pressure upon the abdomen at a point midway between the umbilicus and the ensiform cartilage, the mechanism of which is thought to be dependent upon compression of the aorta.

THE TRUE PATHOLOGY OF SUDDEN DEATH IN ACUTE PNEUMONIA, AND THE BEST MEANS OF AVERTING IT.*

By CHAS. F. J. LEHLBACH, M. D.,
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The committee on business of last year, in formulating this subject for discussion, have undoubtedly sought to limit it to those cases of sudden death in acute pneumonia which seem to be disconnected from any pre-existing or merely accidentally intercurrent fatal morbid process, or complication. A patient passing through acute pneumonia, with previously existing chronic degenerative nephritis may suddenly be seized with uræmic convulsions, coma, and death; or a sufferer from chronic rheumatic endarteritis of the cerebral vessels may during a fit of coughing in pneumonia be attacked by a sudden cerebral hæmorrhage and die. Such cases do not enter the present inquiry. Their pathology is beyond controversy and there is no preventive means, which may reach them, within our present knowledge.

The class of cases under discussion can best be exemplified by the short recital of one typical case, that of our lamented friend and colleague, the late Dr. Woodhull, of Newark, for a history of which I am indebted to the kindness of Drs. Edgar Holden and Charles Young.

This is Dr. Holden's statement:—"Dr. Addison W. Woodhull, born August, 1831. Died in the Spring of 1876, age 45. One morning he said to me on the street: 'I have a very annoying pain in my left side to-day; I wonder if my old wound is going to trouble me.' He went to New York and before his return took a Turkish bath, and on his return home felt miserable but went on with work; was taken at night with a chill and slight dyspnœa; this was followed by fever, cough and soon rusty colored sputa. Dr. O'Gorman and myself attended him; rapid consolidation of the lung (I think the left) followed.

"The disease ran the usual course of a unilateral pneumonia in a man with sound heart, for I examined not only then, but I before had examined him for life insur-

*Read before Medical Society of the State of New Jersey.

ance, and at that time found no impairment of any organs, save the left pleura thickened and adherent where he had been wounded. My impression is that the chest wound involved only the thoracic parietes, including the pleura but not the lung.

"At about the end of three weeks he was so far convalescent that we said at our morning visit: 'You will not need us any more but we will drop in occasionally to see how you regain strength.' He was able to sit up several times through the day and felt well, had return of appetite, but remarked every day that he could not understand the continuance of the stained sputa. This, from the second day of its appearance, had been not simply rusty, as is usual, but quite red, indeed at times almost jelly-like, and we had frequently discussed the significance of it; but the most careful daily examination had failed to detect any symptom or abnormal sound, rate or area of dullness not perfectly consistent with the diagnosis of acute unilateral pneumonia. We left him on Sunday morning, he saying 'I will be out in a week at the most, and feel well enough to go now.'

"Upon returning from professional calls, I found an urgent message to go to him but found him dead." The following is Dr. Young's statement:

"While passing through Kinney street near Dr. Woodhull's residence, I suddenly heard my name called loudly, and, turning around saw the call came from Dr. Woodhull's house. Rapidly entering I saw the patient within ten minutes, probably less, after the first seizure, which was described as follows: The patient had been sitting up by the window, when he suddenly complained of feeling faint, without any pain, and was assisted by his wife to bed, when he became immediately unconscious, with slow difficult respiration are rapidly cyanosed. When seen by me he was in this condition with hardly any pulse, deeply cyanosed, irregular and slow respiration, eyes rolled upward out of their natural axis, insensible to light; no sign of any convulsive movement. Recognizing the extreme condition of the patient, a free hypodermic injection of ammonia was given with a view, if possible, to stimulate the heart and of its alkalizing effect upon the blood. Within a very short space of time, the cyanosis began to fade and disappear from the forehead down, so that the face assumed a natural hue; the respiratory rhythm was re-established, the pulse came up, so that it became at least distinctly preceptible.

"This condition of apparent reaction, without, however, any sign of returning consciousness (at least as far as muscular manifestations or impressions were concerned) continued for a short time, almost giving hope of a chance for life, but soon he relapsed into the condition, in which he was first found and died."

No autopsy was made. Indeed the absence of records of post-mortem examinations in these cases of sudden death in acute pneumonia forms one of the difficulties in arriving at positive conclusions as to the cause or causes. The clinical history of these cases leave no doubt as to the diagnosis. A fatal termination is to be expected in a certain percentage of cases of acute lobar pneumonia under any circumstances, a larger proportion occurs in private practice, where the surroundings and other considerations of sentiment or convenience forbid the urging of autopsies as matters of simple scientific interest, and thus in most cases we are satisfied with crediting the sudden fatal termination to any of the various lesional possibilities that may occur in pneumonia by embracing them all under the term, heart failure. But, does this explanation explain? Heart-failure as a true direct cause of death can happen in two ways; either by sudden paralysis of innervation through the branches of the pneumogastric nerve supplying it or the inhibitory-ganglia regulating it; or by structural degenerative changes in the heart muscle itself; in the one case the motor power being lost, in the other the motor machine refusing to act, being worn out. Discarding, hence, the term heart-failure as a pathological entity in explaining sudden death in pneumonia, we are forced to look elsewhere. As a guide in which direction to search for the cause or causes two facts should be borne in mind:

1. That these cases of sudden death under consideration, generally occur during or after apparently fully established convalesence, and

2. That the fatal attack is ushered in suddenly and terminates fatally under tumultous signs of a struggle between the heart and lungs, indicating plainly the sudden occurence of mechanical obstruc-

tions in the right heart and pulmonary circulation, as shown by the weak and imperceptible pulse, the dyspnœa, irregularity of respiration, the intense and rapid cyanosis, and unconciousness.

Of all the authors of treatises on pneumonia in the various text-books, so-called, accessible to me the one who comes nearest to a full appreciation of the true cause of this class of sudden death is Flint. He says: "There is a liability in the course of this disease to an occurrence which claims special notice, namely, coagulation of fibrin in the right auricle or ventricle; that is to heart thrombus; this is of not infrequent occurence in fatal cases of pneumonia. It occurs especially when an entire lung becomes involved, and in cases of double pneumonitis."

"Thrombi formed ante-mortem and not infrequently the immediate cause of death, are to be distinguished from those produced in the last moments of life and from post-mortem clots. Their formation sometimes may be determined and with much confidence during life. In a case presenting no symptoms which denote imminent danger a sudden change takes place for the worse; the circulation is notably disturbed as shown by the frequency, feebleness and irregularity of the pulse; there is a sense of the want of air; the expression is haggard and anxious, cyanosis is more or less marked; the patient falls speedily into a moribund state; and this unexpected change is not connected with an extension of the disease to a new lobe or any newly-developed inflammatory complication."

Assuming then that Flint is correct in ascribing heart thrombus as a not infrequent cause of death in pneumonia, although no special emphasis is put on "sudden death" during apparent convalescence, let us extend our inquiry a little further by including embolism of the pulmonary vessels with heart thrombus, or vice versa. If they are found to be the cause of sudden death in numerous and varied other pathological processes there is, for very good reasons to be alluded to further on, no ground to doubt that we here have the principal cause of sudden death in pneumonia. It is not intended to go into an elaborate or exhaustive examination of details. A few facts obtained by a cursory examination of accessible records will illustrate the subject.

Dr. Raywood Johnson in the transactions of the Path. Soc., London, 1889—(*Schmidt's Jahrb.*, Vol. 229, p. 249,) describes the case of a woman fifty-four years old, with varices of leg and phlebitis, who died suddenly in an attack of dyspnœa, of embolism in the pulmonary artery, six to seven inches in length, resting on the bifurcation.

A case of sudden death in a case of typhoid fever by embolism of the pulmonary artery is reported from the *Prazer Viertelzahnsen, in Schmidt's Jahrb.*, Vol 228. p. 215. Autopsy showed tolerably coherent coagula in the main trunk of the pulmonary artery.

A case of sudden death in consequence of formation of thrombus in the pulmonary artery, occurring in a case of acute exudative pleuritis is reported by Dr. Dujardin Beaumet in *Gaz. de Paris* (*Schm. Jahrb.*, Vol. 171, p. 150) death occurred when patient got out of bed to go to stool.

In a paper on sudden death by pulmonary embolism in cases of inflammatory varicose veins, Dr. Marc Chabenat, of Paris, (1874) collected seven (7)cases. In five (5) cases the autopsy showed presence of emboli in the right heart and trunk of pulmonary artery; in the other two cases no autopsy was made, but the history of the case was clear as pointing to the same causes. The author calls attention to the fact that the neighborhood of large venous trunks in which the blood flows yet uninterruptedly favors the detachment of an embolism. In all these cases the emboli were large, as large as a finger, and the detachment of the emboli always took place in the convalescent stage on occasion of sudden movements in bed or when getting out of it.

Two cases of sudden death from embolism and thrombus in the pulmonary artery are reported (*Bullet. de la Soc. Anatom., in Schm. Jahrb.*) due in one case (Dr. Cossy's) to inflammation of the crural vein after operation for strangulated hernia: in the second case, reported by Dr. Hegar, due to thrombosis of the left femoral vein after enucleation of a uterine myoma.

Spontaneous extensive thrombosis of the pulmonary artery caused sudden death in a young chlorotic girl, after a short attack of dyspnœa. Reported by D. H. Rendt, (*Gaz. Hebdom.*, XXXIV, 16, *Schmidt's Jahrb.*, Vol. 215, p. 249). Embolism excluded.

In his inaugural dissertation, Dr. B. L. B. Bang (*Afhandl für Doktorgraden, Schmidt's Jahrb.*, 1882, vol. 195, p. 289) a study of twelve cases of embolism or thrombosis of the pulmonary artery concludes that the most dangerous, i. e., the large emboli, mostly occur in the cases in which the clinical histories show no sign of presence of pre-existing cause.

In a paper on "Sudden Death in Pleurisy" by D. E. Weill (*Revue de Med.*, vol. VII, p. 33, *Schmidt's Jahrb.*, vol. 214, p. 30) the author collects twenty-seven cases of sudden death in pleuritis: in eleven of these cases there was thrombus-formation in the right heart and embolism of pulmonary artery or changes in the myocardium; in six, œdema of the lungs: there was one of pericarditis; in two perforation took place into the lung and in seven cases the autopsies showed no certain cause of death. These latter may have been due to direct heart failure or brain anæmia. In most of these cases death occurred after strong muscular movements—only three died while quietly lying in bed.

Prof. Adolf Lesser of Breslau, in *Vierteljsch fuer faren Mediz., Schm. Jahrb.* vol. 219, p. 74, gives the most important autopsy results in 171 cases of sudden death; only in fifty-three cases an anatomical cause for the suddenness of death was reached; in twenty-one cases there were pressure upon the brain, apoplexy, tumors, hæmorrhage, aneurism; seven were cases of cardiac aneurism; eight times there was suffocative hæmoptysis and bursting of aneurism into trachea; in seventeen cases aneurism was the cause accompaning the fatal result; six were caused by embolism of the pulmonary arteries; in seven cases genuine pneumonia existed, where no direct cause could be found.

In the Medical and Surgical History of the War of the Rebellion, Part 2d, Medical Volume, under the history of acute diarrhœa among the post-mortem appearances noticed, special mention is made of over thirty-six cases in which "fibrinous heart-clots with or without an admixture of ordinary coagula were observed." Two of these cases are noted as having died "very suddenly" and "suddenly." One of these cases died suddenly of pneumonia, and in looking over the details I find that eleven of these cases of heart clot and clots in the pulmonary arteries credited to acute diarrhœa were shown by the autopsies to have been complicated with pneumonia in various stages of progress and intensity, namely cases 162-330-352-353-360-377-385-412-525-642-749.

A cursory examination of the details of cases of pneumonia given in vol. 3d of the same work, is negative as to the occurrence of ante-mortem thrombis or embolism and their bearings to sudden death.

If we assume then, that thrombosis or embolism of the heart and pulmonary arteries constitute the true pathology in a certain number of cases of sudden death in pneumonia, as well as in other diseases —an assumption based upon undoubted facts—we are naturally and logically led to enquire whether the pathological processes and conditions of pneumonia are favorable to their occurrence. Such seems to be the case.

Aside from the undoubted increase of fibrin in the blood in pneumonia, as in acute rheumatism and erysipelas, and its probable greater tendency to coagulation, the pathological processes going on in the minute structure of the lungs in pneumonia themselves are not unfavorable to the occurrence of thrombi and emboli. When the air spaces and bronchi have become fully distended by the exuded inflammatory products and the lung has become solid, when the air vesicles, the air passages, the small bronchi and sometimes the large bronchi are filled and distended with fibrin, pus cells, red blood cells, and epithelium we are told by Delafield and Prudden (Hand-book of Pathology) that "in spite of the pressure on the walls of the air spaces, the blood-vessels in their walls remain pervious." Hence if even a very minute thrombus shall have accidentally formed in one of the small branches of a pulmonary vein, entering into the formation of the vascular network surrounding the air vesicles, this very fact stated by the eminent pathologists cited "that the vessels remain pervious" would favor its detachment and chance of entering the current of blood into the right auricle, thence into the right ventricle, there to become entangled in the pectinated muscles or tendinous chords and to form the nucleus of a rapidly enlarging embolic clot extending, as the case may be way into the pulmonary arteries up to the bifurcation, and leading to sudden death.

Another point in the clinical pathology of pneumonia, particularly in infectious pneumonia, which would favor cardiac thrombus and embolus, is the concurrence of endocarditis with the pneumonia. A moderate degree of endocarditis is, I think, a much more frequent companion of inflammation of the lungs than is generally supposed and than it is possible to clinically prove in all cases. "So long" we are told by Delafield and Prudden "as the endothelial linings of the vessels are intact, a simple retardation of the circulation does not usually suffice to induce coagulation, but changes in the endothelium from a great variety of causes, such as inflammation, degeneration, atheroma calcification and the presence of tumors and foreign bodies favor its occurrence." Thus we see that the existence of endocarditis would favor coagulation.

From what has thus far been stated, it is obvious that whatever means of averting sudden death in pneumonia we may employ, they can only be general and precautionary. The patient should be warned even after the temperature has become normal, not to adopt too soon the habits of fully established convalescence. In fact, he should not be allowed to undergo any muscular exertion or bodily effort, not even the passive one of sitting up, until the expectoration has become of a character to show that the exudative process has entirely ceased and that the degenerative changes in the exudate, necessary for its removal are about completed. The presence or absence of blood, or of its elements in the expectoration may probably be considered an important guide in this direction. Remedial agents should be employed to allay the severity of the cough with its danger that by mere mechanical concussion of the solidified lung any little thrombi in the pulmonary veins may become detatched and enter the current of blood toward the heart and resulting in cardiac embolism and emboli of the pulmonary arteries. Ammonia in one form or another should be given during the whole progress of the disease, not only as one of the most valuable heart stimulants that we possess but also to counteract the tendency to coagulation and the hyperinosis, or increase of fibrin in the blood of pneumonia patients. For the suggestion of the probable good effect of ammonia to counteract the tendency to hyperinosis in pneumonia, I am indebted to my friend Dr. Charles Young. As to the particular preparation of ammonia to be used there may be little choice; but during the last few years my own predilection has been in favor of ammonium salicylate, as it combines the stimulating effect upon the heart with the action of a general blood antiseptic, in cases of infectious pneumonia, and also on account of its good effect in rheumatic endocarditic complication. It can be simply given in ten grains doses every two to four hours.

Having thus opened the discussion on this interesting subject, while I beg that you will pardon me for not having laid before you a more elaborate study, I hope also that you will agree with me, when I say that it should be our duty in every case of sudden death in pneumonia to insist upon a thorough and minute autopsy so that we may know the cause rather than to guess at it.

DOUBLE HÆMORRHAGIC SUBDURAL CYST.

Dr. Newton Pitt showed a double hæmorrhagic cyst before the Pathological Society of London, which was taken from a man aged forty-six, who had suffered for eighteen months with frontal headaches: at night he occasionally had twitchings on the right side. The twitchings were more frequent two weeks before his death; he then became dull, apathetic and increasingly comatose. At the inspection two thin cysts were found in the frontal region in the subdural space, with walls formed of embryonic vascular connective tissue, ¼ mm. thick, containing on the right, six ounces, and on the left, three ounces of serous fluid with recent blood clots. The dura mater was not inflamed. The cysts were attached to the dura mater, but not firmly, and were not attached to the brain. The inner surface was as smooth as that of normal dura mater. The case was a typical example of those cysts whose hæmorrhagic origin was first clearly demonstrated by Mr. Prescott Hewett in 1845. The sources of the hæmorrhage in such cases are from the degenerate cerebral veins in the wasted brains of general paralysis; from either the dura-mater or the pia arachnoid when due to typhus, relapsing fever, and similar conditions producing degeneration of the blood.—*The Lancet,* Nov. 8th, 1891.

COMMON BOILS AND CARBUNCLES.

By P. J. FARNSWORTH, A. M., M. D.,
CLINTON, IOWA.

Early in my practice I stumbled on a successful course of treatment for aborting boils and carbuncles in their early stages and of conducting them to a speedy and painless consummation if not seen until well started.

In the later discoveries of science I have found the reason for my treatment and abundant justification.

If my attention is called to the disease in its pustular stage I apply *unguentum hydragyri.* If they are occuring in a crop several applications are made to a considerable surface. This prevents their recurrence, and aborts those underway. If the boil is fairly begun, is congested. cyanosed and throbbing, "a blue boil" I apply a plaster of *gum opium.* The gum moistened and spread on a cloth or the powder mixed with cerate. In a short time the throbbing ceases, the congestion is removed and in a few hours a circumscribed suppuration takes place (comes to a head at once), the core or nidus comes out. An antiseptic wash soon completes the cure.

If the pustule is judged to be a carbuncle, a plaster made with mercurial ointment (*ung. hydrg.*) and powdered opium is applied, which either checks it in the start or converts it into an insignificant affair, soon maturing.

It has been recommended to introduce into the boil, in its early stage, an injection of carbolic acid. This has been successful but is quite painful. Cocaine has been suggested, but the same objection holds. A strong solution of hydrg. bichl. 1 to 100 applied to the pimple or pustule is more effectual and produces little pain. It acts in the same manner as the mercurial ointment, destroying the microbe. The injection does not always strike the nest.

In some cases a plaster of extract of belladonna, if far enough from the place not to affect the eyes, acts as well as the opium. The effect is to tranquillize the nerves and also to narcotize and prevent the propagation of the specific microbe.

My first case was a lady, past middle life, of rather broken down constitution, I found a crop of boils covering her back and shoulders, thirty or forty in number, from the size of a pea to that of a walnut. The pain and irritation was intense. She warned me not to give her an opiate, as that would only add to her suffering. Calling for some lard I mixed with it half an ounce of pulverized opium spread it on a cloth and applied it to the back. It soon produced relief. I left with directions if any signs of narcotism appeard to remove the plaster and wash the surface clean.

When I returned the next morning the patient was sitting up in an agreeable frame of mind, having enjoyed a pleasant night's rest and showing no signs of narcotic effect or sequela. On removing the dressing I found the surface whitened, and most of the boils open and suppurating. A linseed poultice was then applied and in a few days the patient was well. It seemed at the time a life-saving application.

Since then I have never met so large a number together but have put on the opium plaster on single ones many times with the same good results. To the boils recurring in the vicinity of one that has seen its course, apply the mercurial ointment. If they are scattered over the person use on them, if seen early enough, the unguentum hydrg., or the solution of the bichloricle, to abort them. If they have passed this point apply the opium plaster or the belladonna. If the system is in bad condition give constitutional treatment—mercury in small doses, tonics, iodides and sarsaparilla.

The carbuncle requires a more vigorous treatment. The crucial incision, if far advanced, and the ointment or wash of mercury. If in the early stage, apply opium mixed with the mercurial ointment. In either case when the opening comes use a syringe and wash out the cavity thoroughly with a mild bichloride solution or a strong one of carbolic acid.

The application of opium to an inflamed surface may be much more extended. It relieves the pain and prevents the spread of traumatic erysipelas. and is valuable in burns and extensive ulceration. A poultice or fomentation as commonly used is a germ disseminator and cultivator. For open sores apply a cirate of opium and a covering of absorbent cotton. Fomenta-

tions are useful in deep seated phlegmons but when near the surface apply the opium as a plaster or cerate.

Very little of the active principle is absorbed through the skin or from an inflamed surface, to affect the nerve centers. Its effect, however, over inflammation is remarkable. It is more than probable that to this probably may be attributed its influence in peritonitis. It not only quiets the brain but the nerves of sensation and prevents or checks inflammation. Opium is admissable in inflammations of any part except of the bronchi, with equally good effect.

RETAINED PLACENTA: EFFECTS OF ATMOSPHERIC PRESSURE.

Cavilan, of Durango, Mexico (*Arch. de Tocol. et de Gynéc.*, March, 1892), attributes retention of the placenta to atmospheric pressure. His father, in the course of a large practice, only met with one case in thirty-five years of true, adherent placenta. He maintains that all the morbid conditions which might cause adhesions, such as uterine inflammation and placental apoplexy, produce abortion before any firm adhesions could be established. The common so-called "adherent placenta" represents an effect of atmospheric pressure. The central part of the placenta is first detached, and thus between the uterus and the maternal aspect of the placenta a vacuum is formed, the placenta being in the mechanical condition of a cupping-glass. Its edges are firmly pressed against the uterus. Pulling on the cord simply encourages the development of the vacuum. Abuse of ergot does the same kind of harm. Credé's method of expression prevents or overcomes the vacuum. When the placenta is distinctly "adherent," the vacuum must be destroyed. Cavilan acts in the following manner. The midwife or assistant pulls the cord firmly, obstetrician steadies the fundus with the left hand and perforates the placenta, close to the cord, with the right fore and middle finger. As the uterine tissues are far tougher than the placental tissues there is no fear of perforating the uterus with the fingers. The air then enters the vacuum and the placenta can easily be detached. The strongest antiseptic precautions are necessary during this manœuvre.—*Brit. Med. Jour.*

Hospital Reports.

BRAINARD MEDICAL SOCIETY OF WISCONSIN.

This Society recently met in Chicago, and devoted part of its session to attending the following clinics at Rush Medical College:

CLINIC ON PRACTICE.

Prof. Henry M. Lyman, speaking on massage, explained that it was not, as was so generally believed, a process of rubbing, but rather manipulation, and to better illustrate this had a patient brought to the amphitheatre to be massaged by a professional masseur. The professor explained that massage should always be commenced at the extremities, working toward the body, care being taken that every part of the limb be treated.

The Professor lauded its action in inducing contraction of the arterioles and thus accelerating the circulation, improving the nutrition of the parts, stimulating absorption and increasing secretion from the various organs.

It is in patients run down by pressure of business, etc., that we often prescribe travel, and this in patients who can afford the time and money is very well; but Doctors should not prescribe things that cannot be done, and it is in these cases that massage came as a boon, as it could be afforded by every one; it required but an hour every other day to get its benefits. It was wonderful how these patients, run down and exhausted, picked up, their appetites increasing, insomnia disappearing and the general circulation improving even after using it only for a short time. In continuation of the clinic a number of cases were brought in suffering from central nerve lesions. Two children suffering from the effects of poliomyelitis, one little girl, about 13 years old, suffering from mobile spasm or athetosis, and a little boy suffering from epilepsy, with attacks of mania following the epileptic attacks.

The histories of the cases of poliomyelitis were read by Dr. Cleveland which were similar to all these cases, the one lower extremity in each of the children was atrophied and shortened. The girl with athetosis gave no history of injury or prior disease of the brain or its envelopes. The

spasm of fingers and hand were very characteristic. In speaking of the seat of the trouble in these two groups of cases the Professor explained that in the cases of poliomyelitis, the lesion would be found in the cord, while in the case of mobile spasm it would be found in the brain, either in the thalamus, the lenticular nucleus, or somewhere in the gray matter of the pyramidal tract.

In the former cases judicious treatment should be followed by improvement, while in the latter, treatment on account of the nature and seat of the lesion, precludes their removal by remedial agencies.

The case of epilepsy was rather rare on account of the maniacal attacks following the epileptic attacks, as in most cases they precede the same. The patient kicks and bites and would destroy anything that happened to be in reach during these attacks, although perfectly harmless at other times. He has a history of insanity, as his father is insane. The Professor explained how these patients might become criminals, committing even homicide during these attacks, and yet be perfectly unconscious of the fact.

Some such patients would travel to a distance behaving well and having an attack of epilepsy return to consciousness, perfectly unaware of the just preceding acts, this might even lead to a dual life of the individual.

SURGICAL CLINIC BY PROF. N. SENN.

Prof. Senn in his clinic presented a number of cases, that had been operated on the last few weeks.

The first case to which attention was called was a laparotomy for the purpose of removing a fœtus in the free abdominal cavity. It had been there dead for some years. The fœtus at the time of death must have been about seven months old. In making the operation the placenta was found to be nearly absorbed, and what remained was therefore not removed, trusting that the remaining part would be absorbed, as the absorbing power of the parts would be increased by the removal of the fœtus.

The patient and the fœtus were shown; the patient had made an uninterrupted recovery, temperature normal after first day. The Professor thought that not withstanding Tait, he thought this case showed that the embryo could and did develop in the free abdominal cavity, as no symptoms of rupture could be elicited.

A case was next shown in which an operation for a large ventral hernia had been made with splendid success, the cicatrix being perfectly firm, and yet the Professor would advise her to wear a pad for some weeks as these cicatrices were always treacherous.

The next case was one that had suffered from pyelonephrosis and had been operated upon some weeks ago. The interesting part in the case was the large size of the stone that was found perfectly impacted in the pelvis of the kidneys, so that it was with great difficulty removed. The Professor laid great stress on his advice not to crush or break up such a stone, but to remove it whole even if the tissues should receive a little more injury, as through crushing, the liability of leaving pieces of the stone is great, which would merely serve as a nucleus for a return of the whole trouble.

The next case shown was one of nephrectomy that had been performed some time ago. In this case the occlusion of the ureter had dated back eleven years, it was therefore reasonable to suppose that the kidney structure had all disappeared, and on removing the kidney, it was found to be atrophied to the thickness of cardboard, perfectly translucent and yet Professor Senn was surprised to find on microscopical examination healthy kidney structure atrophied to be sure, greatly atrophied, but still perfectly normal structure. (Sections under the microscope were shown.) The Professor emphasized that here was a case of eleven years standing, a perfectly translucent kidney, and yet healthy structure, and it was important to save every particle of healthy kidney for your patient, nephrectomy never being justifiable as a primary operation if their be reason to believe there is any healthy kidney structure to be sacrificed. The following case of pyelonephrosis was diagnosed and operated on:

Young man, large tumor of abdomen, prominent on left side, fluctuating and most prominent between crest of ilium and lower border of rib, left side. The diagnosis of nephritic abscess was made and to verify its being a retroperitoneal tumor the hydrogen gas test was made. As the gas filled the colon, which was readily shown

by percussion, the tumor receded or rather the colon covering the tumor, the dullness disappearing and resonance taking its place. This proved that the tumor was retroperitoneal. The patient being anæsthetized, Professor Senn operated as follows: placing the patient on his right side, with a large round cushion under his right loin; this is important as it gives prominence to the opposite side and widens the space between the crest of the ilium and the last rib. Simons' incision was made and after reaching the tumor, an exploring needle was passed into it and pus withdrawn; the needle being left as a guide, the Paquelin cautery was used to make an opening through the kidney structure, a large amount of pus escaped, the tumor entirely disappearing. A thorough search was made for stone or other foreign body, but nothing was found. After a thorough washing out of the abscess a large double drain was introduced and the wound dressed with iodoform gauze packing, etc.

The Professor emphasized his advice to use large drainage tubes in these cases, so that the cavity of pelvis of the kidney could be seen and its condition noted, this being of great importance as we could then be certain that when the drainage tubes were removed, that the pelvis of the kidney was in an absolutely healthy condition because the parts could be actually seen and their condition noted before such removal. The Professor here also made a special mention of the value of peroxide of hydrogen for cleansing these and all similar abscess cavities and drew attention to its special use in these cases as by it the permeability of the ureter could be demonstrated.

CLINIC ON SKIN DISEASES BY PROF. HYDE.

The following cases were presented: A case of tinea sycosis, in which attention was drawn to its superficial resemblance to epithelioma. The next cases shown of tinea favosa, four in number, and they well illustrated the various phases of the disease. The one showing the smooth, shiny, parchment-like membrane of cicatrization and atrophy of a long standing case, the whole of the scalp being in this condition. The patient had received no treatment. The second case showed the same condition on a small patch, the patient having had treatment, the disease was stopped in its progress.

The other two cases showed the characteristic patches with irregular outline, festooned like, the lustreless dull stubs of hair, the yellowish greenish hue. As to treatment Professor Hyde used corrosive sublimate solution, carbolic acid and iodine, chrysarobine ointment, but would like to add that it will be a tedious cure, which will try the patience of both physician and patient.

The Professor had the group photographed, as it was rare to be able to get together four cases at one time at one clinic.

A case of *psoriasis* was shown with characteristic appearance. The Professor said that the variety we see here in this country is mostly due to the peculiarity of our spring and about the only treatment necessary is to wait for warm weather when the psoriasis will disappear, to return the following spring.

A case of *pityriasis versicolor* was shown, illustrating beautifully this disease.

The last case shown was one of *lupus vulgaris* of the face. The Professor in showing the case drew especial attention to the appearance of the patient, when the face was seen in profile, when as in this case the nose was attacked, in differentiating from syphilitic destruction. In the latter the nose was brought down in the middle, the tip rising, the nose becoming flat, while in lupus the nose, one might say melts away, producing as in this case, the typical parrot-peak expression. The Professor did not believe in the surgical treatment of lupus of the face; the best result he has had from the local injection of creosote.

EVENING SESSION.

At the evening session of the society the following cases were reported by the members:

Dr. P. O'Keef, of Oconto, Wisconsin, reported a case of laparotomy for ovarian tumor, attached to the fallopian tubes, size of large orange, cystic. After removing this and examining abdomen found another tumor on the right side, which proved to be a hæmatocele. Drainage tubes were used. Temperature never rose above 99°F. She had had a severe attack of pain in abdomen in December and the

hæmatocele undoubtedly dated from this time.

Dr. E. J. Smith reported the following cases:

A case of strangulated hernia of five days' standing.

The strangulation took place on Feb. 18th, the Dr. being called on the 23rd. for the first time. Considering the length of time that had elapsed since the beginning of the strangulation, the Doctor advised an operation at once without attempting reduction.

On reaching the intestine he found the same gangrenous, so that about two inches had to be resected. Circular enterorrhaphy was performed; the continuous Lembert suture was used. Silk was the suture material. The sac was dissected out, no drainage was used. Local anæsthesia by the use of cocaine injection was used. The Doctor in making the injection enters the needle only at one point, pushing it along under the skin its full length, in the direction of the proposed incision, then injecting as the needle is withdrawn, not allowing the needle however to escape from the skin, it is reversed and again pushed its full length under the skin in the opposite direction, and again the injection is made while withdrawing the same. The patients complain of no pain during the operation.

The case made a complete recovery, only two dressings being required. The Doctor then reported a case of operation for gall-stone in which the gall-bladder was opened and 142 gall-stones removed; there had been an attack of peritonitis some time before, and at the time of operation, the peritoneum was adherent to gall-bladder. This case also made a good recovery.

Wm. Hausmann,
Secretary.

Elmore, Wis.

MALE FERN TOXICITY.

It has been demonstrated by Quirll and Poulsson that oleoresin of male fern may develop its toxic properties when combined with or followed by castor oil, this being due to the solubility of the active constituents in oil, whereby absorbtion is favored. To avoid accidents, it is hence recommended to employ with this tænicide some cathartic other than castor oil.

Selected Formulæ.

The best general pill excipient I ever saw or used is made as follows:

℞ Powdered slippery elm.....2 drams.
Flour.....1 dram.
Glycerin.....2 drams.
Water.....4 drams.

Boil until thick paste is formed and be careful not to burn it.

—*F. P. Brigham, Jeffersonville, Indiana, in Meyer Brothers' Druggist.*

SICK HEADACHE.

For a long time I have searched for a prescription that would cure sick headache. Various combinations were tried, but nothing satisfied me until I came across the following in an English work on "Headaches; their Nature, Causes and Treatment," by Wm. Henry Day, M. D. To this I have added one ingredient, the bromide of ammonium. Some may object to the formula on the ground of polypharmacy, but where every drug is given for a definite purpose it is allowable to combine many ingredients into one prescription, especially when the resulting compound is as efficacious as the following:

℞ Sodii bicarb.,
Bismuthi subcarb.,
Pulv. acaciæ.....āā..℥ j.
Spts. ammon. aromat.....℥ ij.
Ammonii bromidi.....℥ jss.
Syr. zingiberi.....℥ iij.
Aquæ dest., q. s.....℥ viij.

M. Sig.—℥ j as required.

—*Ex.*

ULCERATED CHILBLAINS.

Dr. Brogg (*Internat. klin. Rundschau*, No. 46, 1891) prescribes in ulcerated chilblains the following salve:

℞ Acid carbolic.....1 gram.
Unguent. plumb. } āā 20 grams.
Lanolin... }
Ol. amygdalar. dulc.....10 grams.
Ol. lavander.....gtts. xx.

Apply two or three times a day.

DIGITALIN IN CARDIAC DYSPNŒA.

℞ Digitalin (crystallized).....10 cgrams.
Glycerin (30° Be.).....33 cc.
Distilled water.....14 cc.
Alcohol (95 per cent.) to make....100 cc.

(50 drops of this solution represent 1 milligram of Digitalin.)

℞ Digitalin (crystallized)..... 0.02 gram.
Alcohol.....12 grams.
Glycerin.....12 grams.

(60 drops of this solution represent 1 milligram of Digitalin.)

FORMULA FOR THE TREATMENT OF BURNS.

According to *L'Union Médicale* for January 14, 1892, Nikowsky recommends the following treatment in burns:

℞ Tannic acid.....3 iiss.
Alcohol.....3 iiss.
Sulphuric ether.....3 iiss.

Sig.—Make a solution, and apply locally in cases of burns of the second or third degree. Wash the part with a solution of boric acid, puncture the blebs, and apply by means of a camel's-hair pencil the solution of tannic acid just named. Cover the part with cotton wadding.

PERMANENT SYRUP OF HYDRIODIC ACID.

℞ Iodide of potassium.....123 grains.
Tartaric acid.....112 grains.
Water.....½ fluid ounce.
Diluted alcohol.....1 fluid ounce.
Syrupy glucose.....¼ fluid ounce.
Syrup.....enough to make 16 fluid ounces.

Dissolve the iodide of potassium in ½ fluid ounce of water and the tartaric acid in ½ fluid ounce of dilute alcohol. Mix the two solutions in a vial, cork and shake it well, and then place it in ice water for about one-half hour; again shake it thoroughly and then pour the mixture upon a small white filter, and filter into a bottle containing 13¾ fluid ounces of syrup and ¼ fluid ounce of syrupy glucose. When the liquid has run through, wash the vial and filter with ½ fluid ounce of diluted alcohol, added in several portions. Then add enough syrup to make 16 fluid ounces.

This method is said to afford a clear, transparent and permanent syrup. Glucose is singularly well adapted for the preservation of all syrups of the iodides or bromides, as with its use the reduction of the compound is greatly retarded.—*J. W. England.*

ANTISEPTIC TREATMENT OF PROFUSE DIARRHŒAS.

Dr. Broughton (*Deutsche med. Wochenschrift*, No. 1, 1892) recommends the following formula:

℞ Salicylate of bismuth.....10 grams.
Sulpho-carbonate of zinc.....2 dgrams.
Lime water, Distilled water } āā 50 grams.
Tinct. benzoated opium.....20 grams.

A teaspoonful every two hours until the diarrhœa ceases.

EUA ANTISEPTIQUE DE PAGLIARI.

The *Bulletin de la société pharmaceutique du Nord*, gives the following formula for Pagliari's antiseptic:

℞ Alum.....100 parts.
Benzoic acid.....2 parts.
Tincture of benzoin.....10 parts.
Water.....888 parts.

Dissolve the alum in the water by the aid of heat, add the benzoic acid, and, finally, the tincture of benzoin. Agitate strongly, let cool, and filter. This makes an excellent toilet antiseptic and can be used as a styptic in mild hæmorrhages, etc.

NEW METHOD OF EXAMINATION OF THE DIGESTIVE ORGANS.

Dr. Sahli, of Berne (*Correspondenz. Bl. F. Schweitzer Aerzte*: No. 2, 1891), has adopted the following ingenious procedure for determining the condition of the digestive functions: A pill containing about three grains of iodide of potassium is enclosed in a round sheet of very thin gutta-percha paper, the free margins of which are twisted in form of a bag and then fastened by a firm moist cord of fibrine, about one-eighth inch thick. The ends of the cord are brought together by a thread. The rubber sheet should be well covered with talcum, so as to prevent adhesion of the opposed surfaces. To protect the bag during swallowing, it is enclosed in a gelatine capsule. The author's object was to determine the time required for the iodide of potassium reaction to manifest itself in the saliva under various physiological and pathological conditions, this depending upon the rapidity with which the fibrine cord was digested and the iodide set free from its envelope. It has been stated that the manifestation of the iodide of potassium reaction depended upon the quantity of free hydrochloric acid in the stomach, but Sahli's experiments tend to show that the quantity of contained acid exerts less influence than has been thought. In like manner the administration of soda and pancreatic ferments in cases of deficient acid production, for the purpose of initiating intestinal digestion in the stomach, had no effect in accelerating the appearance of the reaction, and sometimes even delayed it. The reason of this was found to be that the acid and pepsin, or the pancreatic ferments, remained for too short a time in the stomach to exert any digestive action, being partly absorbed and partly passed into the intestines.

The value of this method in demonstrating the condition of the digestive functions is shown by some experiments made by Dr. Henne regarding the influence of pepper on stomach digestion. He found by chemical examination of the gastric juice that pepper administered in doses of 2½ grammes before meals had no essential effect upon the gastric functions, but that the iodide reaction appeared earlier if no pepper was given. Owing to the laxative effects of pepper, as demonstrated by these experiments, it is probable that it exerts a favorable effect upon intestinal digestion.

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Leading Articles.

THE TREATMENT OF ULCERS OF THE LEG.

The therapeutics of ulcers and varicose veins of the lower extremities may fittingly be considered together, because in hospital practice, at least, a very large proportion of leg ulcers are directly or indirectly due to over distension of the veins of the part.

Although this affection is a very common one, it is a fact that too often its treatment lacks the care and precision with which other surgical procedures are carried out. Of all the various forms of leg ulcers the varicose ulcer is certainly the most chronic as well as the most common. Since the pathology of these ulcers has been better understood, together with the conditions necessary for their reparation, more rational treatment has undoubtedly been pursued by the great mass of the profession. The importance of rest, position and pressure has been generally realized, and the means by which these ends have been sought particularly comprise nearly all of the modern modes of treating them. While certain modifications of treatment are almost universally advised in the different varieties of leg ulcers, in general terms the condition of the ulcer itself is the only practical guide to a rational, local therapeusis. Consequently, it matters little regarding local treatment whether an ulcer belongs to one or another of the classes ordinarily seen, viz: simple, varicose, syphilitic, tubercular, epitheliomatous, traumatic, etc.

The diagnosis of leg ulcers usually is a very simple mental process. Sometimes, however, it it very difficult to decide as to the real nature of certain forms of ulceration. In doubtful cases which have resisted thoroughly applied local and general measures it is always wise to call in consultation a well-qualified specialist upon skin diseases, and often it will be found that some important ætiological factor has

been overlooked, or that the specialist will distinguish the obscure and intractable lesion as belonging to a class in which amputation may be the only resort, viz: in bad cases of malignant ulceration. In this connection it should be borne in mind that long standing cases of simple ulceration may rapidly become malignant.

At a recent meeting of the Philadelphia County Med. Society, Dr. Thomas S. K. Morton read a very interesting paper upon the treatment of leg ulcers, in which he claimed many advantages for the mode of treatment pursued by him at the Philadelphia Polyclinic. His results have been so good that it will be of value to note his method. This consists in washing the ulcerated area thoroughly with soap and water, then with 1:1000 bichloride solution; the surrounding parts are shaved if this seems necessary to secure cleanliness. If no septic conditions are present in or around the ulcer the bichloride is omitted. Next, the ulcer and one inch of the surrounding healthy skin are covered by overlapping half inch strips of "Lister protective," over which moist bichloride gauze is evenly placed and the dressing completed by a bandage. The bandage is perhaps the most important part of this treatment, and consists of figure-of-eight turns around the calf, without reverses—the precaution in applying it being to keep the two edges of the bandage equally tense. Dr. Morton has used this bandage for the past five years, and he states that it will not only remain just as applied for days or even weeks and be absolutely comfortable to the wearer, but also permits the employment of the fixed antiseptic dressing while patients pursue their usual occupations almost unconscious that their former disabling disease is still present. This dressing is reapplied every day until the parts become odorless, free from all irritation and aseptic. Subsequently it is renewed every second day if the patient is actively working. By this simple form of treatment assisted by the application of silver nitrate solutions, scarification, occasionally skin grafting and applications of pepsin to large sloughs when these measures seem indicated, Dr. Morton claims that the time required to heal is usually incredibly short.

The method of treating this class of ulcers which has just been detailed can be employed with great advantage among the poorer classes, and its adaptability for such cases is at once apparent.

When varicose veins constitute the active cause of the ulceration, it becomes a question of how the vessels can best be supported. A firm, even bandage is after all the supporter *par excellence* and is usually effective in all mild or moderately severe cases. Where, however, the varices involve the greater portion of the limb, excision of the enlarged veins is the best remedy for the ulcers present. A very good remedy for varicose veins, according to Morton, is an ointment of ichthyol and lanoline (1:4) spread upon lint and applied to the limb by the same bandage which he ordinarily employs in dressing.

SYPHILIS OF THE PHARYNGEAL AND PRE-EPIGLOTTIC TONSILS

Drs. Moure and Raulin. (*Rev. de Larynx. Ot. et Rhin.*, No. 6-7, 1891.) make a contribution to the study of the manifestations of syphilis upon what have been described as the third and fourth tonsils, or in other words in the adenoid tissue in the vault of nasopharynx and in the follicles of the buccal pharynx at the base of the tongue.

The lesions, it would appear, are identical with those which occur upon tonsils proper, but their study has been neglected. When present they may cause modifications in deglutition, phonation and respiration, and may point to the seat of trouble in ear complications where nothing is taught by a superficial examination of the back of the mouth and throat. Dr. Labit thinks the abuse of alcohol and of tobacco influences not only the development of these lesions but their duration.

Book Reviews.

THE SCIENCE AND ART OF MIDWIFERY. By William Thompson Lusk, A. M., M. D. Professor of Obstetrics and Diseases of Women and Children in the Bellevue Hospital Medical College Fourth edition, revised and enlarged. New York: D. Appleton & Co., 1891.

The rapid strides of progress in midwifery and gynæcology are nowhere better illustrated than by a casual glance at the successive editions of the text-books on these subjects. The greatest advances will be noticed to have occurred in those directions in which modern surgery has cleared away many formerly insurmountable obstacles from the pathway of the practitioner in these branches.

In comparing the present edition of this work with its predecessor, we observe such vital differences, according to our modern thoughts, that for all intents and purposes the book before us is almost wholly new, only retaining the literary style and arrangement to mark its relationship to the volume of a few years ago. The development which has occured in the theory and practise of midwifery has been due to the pains-taking efforts which have more recently been in vogue to reduce our knowledge of the anatomy and pathology of the pelvis and its organs to exactness of expression and record. The studies in the normal and pathological anatomy of the pelvis have largely contributed to modify the theories and accepted mechanism of labor. The revelations concerning antiseptics and asepsis have largely modified and restricted many of the formerly very common diseases following labor, and their application to surgical practise has made it possible to obtain results which the most sanguine observer of but seven years ago could have conceived scarcely.

From what has been said it will be apparent that it is impossible in our limited space to minutely compare the author's present volume with the edition of 1885. The changes in theory and practice have so radically destroyed many deductions of that period that comparison is impossible.

Many portions of the work have been entirely rewritten. No effort has been spared apparently to present the best obstetrical teachings of the day. The chapters on the mechanism of labor have been most carefully revised. The chapter upon diseases of the decidua is well worth reading. Extra-uterine pregnancy is excellently presented, and the treatment is wholly in accord with the advances which have been made in surgery. Abdominal palpation and pelvimetry receive careful consideration. The instruments used in the latter are carefully described. The subject of puerperal fever is presented with the modern views and compared with former ones. The same may be said of eclampsia. The last chapter of the work contains a well-written, short description of puerperal insanity. The author states that fully sixty per cent. of cases end in recovery. This estimate is lower than that of Bevin Lewis, who has quite recently written a masterly treatise upon diseases of the mind. In the space allotted to puerperal fever there are five very well executed colored prints of microscopic sections of puerperal endometritis, which show plainly streptococci pyogenes, staphylococci aurei, and other forms of disease germs.

The book is very creditably printed and bound, contains 761 pages, 32 chapters, and is illustrated by 232 illustrations and 4 handsomely engraved plates taken from nature. It is a very complete treatise for student or practitioner, and we can unhesitatingly say that it leaves very little to be desired as a modern reference book. The index in by no means an insignificant feature, and adds greatly to its usefulness.

CHANGES IN THE CEREBELLUM AS THE RESULT OF CEREBRAL HYDROCEPHALUS.

Chiari differentiates three types, which are illustrated by exhaustive clinical histories and pathological descriptions, too long for reproduction. As the first type, he describes a drawing out of the cerebellar tonsils and the median part of the inferior lobes into processes which accompany the medulla into the cervical canal. The second type includes the dislocation of parts of the cerebellum into the dilated fourth ventricle, which is prolonged into the expanded cervical canal. As an instance of the third and severest type he relates a case, supposed to be of hydromyelocele cervicalis, in which the sac and contents were removed. Autopsy showed that almost the entire cerebellum, expanded into a cyst, had been removed.—*Deutsche Med. Wochensch.*, No. 42, 1891.

Periscope.

THERAPEUTICS.

TEUCRIUM SCORDIUM IN PRURITUS ANI.

Dr. Brinton (*Wiener med. Presse*, No. 17, 1892) recommends the use of teucrium scordium in pruritus ani. In obstinate pruritus ani from hæmorrhoids or when there is no local lesion, he employs the powdered leaves with success, in doses of five to six decigrammes (eight to ten grains three times a day, half an hour before meals. After they have been used for seven to ten days the pruritus gradually disappears entirely. When the hæmorrhoids, are well developed the results is no so good; from this it is seen that the remedy acts chiefly upon the nervous cause of the pruritus.

THE TREATMENT OF TETANUS.

Rènon (*Ann. de l' Inst. Pasteur*, April, 1892) reports two cases of tetanus treated by the method of Behring and Kitasato. Although both terminated fatally, they afforded some useful indications, particularly regarding the dose of serum which should be employed. Behring and Kitasato discovered that the serum of the blood of animals immunized against tetanus exerted a powerful antitoxic action upon the tetanic poison; they showed that susceptible animals resisted the inoculation of quantities of tetanus cultures several hundred times greater than the lethal dose if the animals were injected at the same time, or some time after, with a little of the blood serum of an artificially immunized animal. Rènon compares his two cases with four recorded by Tizzoni, all of which were successful, and with one of Baginsky and Kitasato which was unsuccessful. In Rènon's own cases the duration of the disease was, in one seven, and in the other, eight, days; in the case of Baginsky and Kitasato the duration was eight days. On the other hand, in two of Tizzoni's successful cases the treatment was only commenced about twelve days after the onset of the disease. From these facts Rènon is inclined to believe that Tizzoni's results were in some degree due to the fact that his cases were of a milder type and of slower progress. He does not consider that the want of success in these cases affords any valid objection to the application of the treatment to cases of tetanus in man: but he points out that it should be commenced as soon as possible, and that possibly larger doses of the serum may be required. He observed no ill-effects from the treatment; on the contrary, each injection was followed by marked, but unfortunately, only temporary relief.—*Brit. Med. Jour.*

ARISTOL IN CHRONIC DYSENTERY.

Dr. Randall (*Med. Neuigkeiten*, No. 17, 1892) has treated three cases of chronic dysentery with aristol with excellent results. The most serious case was that of a sixty-year-old man, who had for six months suffered from chronic diarrhœa, and for the last six weeks had been obliged to keep his bed. The localization of the pains pointed to the lower portion of the tranverse colon being involved in the ulcerating process. A suppository of two and a half grains of aristol and one-third of a grain of morphine was ordered to be inserted three times a day. Two days later the stools became less tepid, more consistent and free from blood. Within a week the painfulness disappeared, and only one more hæmorrhage appeared. The stools, which had been very painful and of hourly occurrence, were reduced to six or eight per diem; they were soft, but not thin, and nearly free from epithelial debris. In ten or twelve days all traces of rectal ulceration had disappeared. Then only one grain was given per diem, and morphine in the evening. In a short time he was on the road to recovery.

ERGOTININE.

In *La Médecine Hypodermique* 1892, No. 2, p. 17, Dr. Franck recommends the use of this active principle of ergot in place of ergotine, which is frequently inert and often untrustworthy. It is prompt, surer, and more constant, does not give rise to local accidents, and is useful in smaller dose—$\frac{1}{250}$ to $\frac{1}{120}$ of a grain. Nor, indeed are these injections painful. Evetsky and Denslow have used it in acne. Alternating with hypodermatic injections of iron, it is useful in the menstrual disturbances of young girls. It has been used with good results in several cases of cerebral apoplexy, epistaxis, hæmoptysis, hæmaturia, hæmatemesis, and purpura

hæmorrhagica. Haning has used it in suppository in hæmorrhoids, and it is valuable used hypodermatically in this same condition when injected into the margin of the anus. Dujardin-Beaumetz has treated with success menorrhagias, Ducros has employed it for paralysis, and Payan for paraplegias. In lead-paralysis Hiter has obtained a cure in less than a month, giving also iodide of potassium. Payan, Allier, and Guersant, Jr., have treated paralysis of rectum and bladder, especially in old subjects, by this remedy.—*Amer. Jour. Med. Sci.*

RESORCIN IN GASTRIC ULCERS.

Pope uses resorcin in a dose of five grains three times a day in cases of gastric ulcer. It is both antiseptic, analgesic and hæmostatic. Its analgesic property being the most valuable, enabling the stomach to tolerate food. He has also given it with advantage in gastric cancer.

TREATMENT OF APPENDICITIS.

At a meeting of the Paris Surgical Society on May 25th, 1892 (*Sem. Méd.*, June 1st, 1892) Jalaguier showed two cases of appendicitis which had been cured by operation. The first was a strong boy, aged 14½, who had had the vermiform appendix removed on account of recurrent attacks of appendicitis. The second was a child, aged 10½, who, after two previous slight attacks of appendicitis, was admitted on March 24th, 1892, to the Hospital Trousseau, presenting the following symptoms, namely, abdomen very tender, especially in the left iliac fossa, considerable distension, frequent vomiting, and pinched expression of face. The temperature was 38.5° C., the pulse 120. A median laparotomy was at once done, and the peritoneal cavity opened. The intestines were seen to be covered with a layer of fibrous lymph, and to be bathed in pus. Collections of pus were also found in the iliac fossa, in the pelvis, and between the omentum and coils of intestine. A considerable collection of pus was also found behind the cæcum; the pus in this part had a fœtid odor, and on washing out the cæcal region a ball of fæces as large as a pea and of the consistence of mastick was removed. The abdomen was then thoroughly washed out with boric solution, and five large tubes inserted for drainage; two were placed in the pelvis, two behind the cæcum, and one in the left iliac fossa. Several strips of salol gauze were also packed over the intestinal coils. The upper three-fourths of the wound were closed with sutures, and a dressing of salol gauze applied. The child bore the operation, which lasted twenty-nine minutes, well; vomiting did not occur, and the bowels were open during the night. Recovery soon took place; the strips of gauze were removed on the sixth day, the drainage tubes reduced to one on the tenth day and discontinued on the fifteenth day. On May 14th the child was discharged well.—*Brit. Med. Jour.*

PIPERAZINE.

Drs. Biesenthal and Schmidt review, in the *Berliner Klinische Wochenschrift*, January 11, 1892, the clinical reports on piperazine which have appeared recently. The reports of Vogt, Ebstein, Heuback, Krakauer, and Brik (see *Therapeutic Gazette*, February, 1892, p. 114) are all very favorable. Testimony seems to be nearly unanimous that the remedy is harmless and that it is effective as a solvent of uric acid.

Biesenthal and Schmidt report seven cases in which the remedy has been tried. Four of the cases are given in detail. In three of the latter, who were gouty patients, and had attacks of gout, marked relief was obtained. The fourth patient had violent attacks of renal colic. On the first day the piperazine was used, an extraordinary quantity of gravel was passed. After the second dose, on the next day, large quantities of gravel were passed several times, and almost immediate relief was experienced. Similar results were obtained in other cases. Biesenthal and Schmidt recommend the remedy very highly.

Internally, they say, piperazine is best given in dilute solution in doses of fifteen grains distributed during the day. Its taste is very slight. As it is not irritating to mucous membranes, a one or two per cent. solution may be employed in washing out the bladder in the case of vesical calculi. Hypodermic injections into gouty deposits and local applications to gouty swellings may also be employed.

THE TREATMENT OF INEBRIETY.

Dr. Charles L. Dana has made a very careful study of 614 male alcoholics treated at Bellevue Hospital. He believes that strychnine has a certain degree of specific effect in inebriety, and in alcoholic intoxication. In acute alcoholism, when the system is overwhelmed with the poison, one-sixtieth of a grain every two or three hours; in the chronic form, it should be administered in good doses for a considerable time. In ordinary acute delirium of alcoholism, twenty to forty grains of chloral, repeated in smaller doses in two or three hours, and combined with digitalis and strychnine, is the safest and surest means of controlling the excitement and securing sleep. A preliminary lexative, and a careful diet of hot milk and beef-tea with red pepper, should be insisted upon. In febrile delirium tremens, depressants must be used with care; cold baths or cold wet-packs, with friction, must be applied every two or three hours while the temperature remains high. Hypodermic injections of morphine are rarely needed, and he does not advise them.—*New York Medical Record*, 1892, No. 1115, p. 309.

PUMPKIN SEED IN THE TREATMENT OF TAPEWORM.

Dr. H. Roemer (*Pharmaceutische Presse*, No. 15, 1892), recommends the peeled seeds of the common pumpkin as an effective and safely acting tæniafuge. For an adult the dose may be placed at sixty or seventy grammes (two to two and a half ounces) of the peeled seeds. Half the quantity of oilless cocoa is added, with a little sugar and some syrup, and water enough to make a plastic mass on rubbing it in a mortar. This is made into fifteen or twenty pastiles and coated with sugar. The patient, after the usual preliminary period of fasting and a dose of castor oil, is given one of the pastiles every ten minutes. Children require but half this quantity. The result is astonishingly good. The writer has expelled over one hundred tapeworms in this manner. Only in a few cases was vomiting noticed. In general, the patient feels no disagreeable symptoms.

The seeds of the last year should be used and carefully peeled, which will be found a tedious task. Whether the oil is the active principle, or whether it is first developed by the crushing of the seed with water, as is the case with bitter almonds, mustard, etc., the writer does not attempt to solve.

TRICHLORIDE OF IODINE IN OPHTHALMOLOGICAL PRACTICE.

At the Ophthalmological Congress recently held in Paris, Pflüger (*Sem. Méd.*, May 4th, 1892) spoke strongly in favor of trichlorine of iodine as an antiseptic in various affections of the eye. He recommends a 1 in 5,000 solution for ordinary cases, and solutions of 1 in 2,000 or 1 in 1,000 when an energetic antiseptic is required, as in infectious lesions of the eye, whether superficial or deep. In commencing panophthalmitis, he uses a 1 in 1,000 solution.

THE TECHNIQUE OF INTERSTITIAL IODINE INJECTIONS IN THE TREATMENT OF GOITRE.

Dr. Duguet has used this method since 1874 (*Journal de Médecine*, 1892, 4e. cahier, p. 129). He concludes that the recent fleshy goitres, occurring ordinarily in young subjects, are the ones which disappear most easily and rapidly; the recent cystic goitres are still more rapidly cured; the goitres of long standing—in general, hard, fibrous, calcareous, sometimes aneurismal—result often very favorably, at other times less satisfactorily. The solution used is one part of iodine to twelve of 90° alcohol, injected with a hard-rubber Pravaz syringe carrying a steel needle, the latter to be cleansed after each time of using with a weak solution of ammonia. In the intervals the syringe and needles are kept in a ten per cent. solution of carbolized oil. The injection is made deeply into the tumor, but only when, after making the puncture, blood does not flow during the ensuing several seconds. The injection is made slowly, watching the patient's face. For checking the cough which may be produced by the injection, after taking out the needle, the patient takes several swallows of wine. These injections are repeated at intervals of eight or fifteen days, but not during menstruation, nor in patients who suffer from albuminuria. The amount injected is seven to fifteen drops.—*Amer. Jour. Med. Sci.*

STROPHANTHUS IN EXOPHTHALMIC GOITRE.

Dr. Fergusson (*Medical Standard*) claims good results from strophanthus in exophthalmic goitre. In nine cases the almost immediate disappearance of cardiac symptoms permitted patients to resume their occupations. The pulse fell from 150 and over to between 85 and 75, and there was a diminution in the exophthalmia, and in the thyroid gland to a fibrous condition, the result of the great duration of the disorder. Fergussion recommends eight to ten drops of the tincture thrice daily. In some cases he has given as much as twenty to twenty-five drops as a dose. Small doses have no effect whatever.

MIGRAINE.

This was the subject of a clinical lecture by Dr. G. M. Hammond. Migraine usually first makes its appearance at about the age of puberty, though it may develop earlier. Angio-spastic migraine is supposed to be due to a spasm of the blood-vessels on the affected side as a result of irritation of the cervical sympathetic. Whether the vascular spasm is a simple accompaniment of the disease, or its approximate cause, has not yet been determined, but in the author's experience remedies which dilate the blood-vessels give relief, while those which contract the blood-vessels increase the pain. In treating this form, inhalations of nitrite of amyl and internal administration of glonoin in doses of 1-100 of a grain, alcohol in moderate quantities, quinine in doses of from 10 to 15 grains, or a hypodermic injection of $\frac{1}{80}$ or $\frac{1}{90}$ of a grain of strychnine, will usually stop the paroxysm. The author does not administer opium for this disease, owing to the liability of the habit being formed. In the general treatment for the disease sources of irritation should be removed; eye defects removed; constipation or indigestion should be removed, or any other condition that may be a contributory cause. Fowler's solution in five or six drop doses three times a day for several months is considered a favorable remedy. Iron, quinine, strychnine and the phosphates are also recommended. Another form of migraine is the angio-paralytic form. In this form the vascular condition is that of dilatation. For this the author recommends phenacetin in large doses, arsenic and the bromides.—*International Clinics*, Jan. 1892.

MEDICINE.

A CASE OF PROGRESSIVE GENERAL PARALYSIS OF VERY EARLY COMMENCEMENT.

Charcot and Dutil (*Archives de Neurologie*, March, 1892) state that the symptoms appeared at the unusually early age of 14, and the further development of the affection leaves practically no doubt as to the correctness of the diagnosis. All the essential symptoms were present, profound impairment of the intelligence, speech embarrassment, pupillary inequality with the Argyle-Robertson sign, trembling of the hands, congestive seizures and attacks of sensory epilepsy. This precocious or *juvenile* variety presents, the writers think, some peculiarities which distinguish it from the ordinary or normal type. Occurring most often at the critical period of puberty (14 to 16), psychical troubles are the first to appear, and one of the most marked features is an arrest of physical development. The mental condition is in the majority of cases one of tranquil debility, without excitement or ambitious delirium, and much resembles that occurring in the general paralysis of women. Its duration varies from two to five years. The chief factors in the ætiology are hereditary neuropathic predisposition and congenital syphilis.

RHEUMATOID ARTHRITIS.

Blake (*Provincial Medical Journal*, 1892, xi, 121, p. 11) expresses the view that a proportion of cases of rheumatoid arthritis are dependent upon some form of intoxication, in consequence of which the nervous system suffers secondarily. He therefore recommends that in a given case a careful search should be made for a source of poisoning from within or without. This found and removed, the circulation is to be supported, mental strain relieved, and nutrition maintained. Passive, motion and massage, conjoined with electricity, should be energetically employed.

MINERS' NYSTAGMUS.

While this is a subject in which our special interest is almost purely a scientific one, it is worth while to note in a few words a review in the *Oph. Rev.*, April, 1892, of a recently published monograph on the subject by Simeon Snell. After a careful study of the conditions under which the miners work, and the details of numerous cases of miners' nystagmus, he very positively attributes the affection to the excessive action of the ocular muscles demanded by the constrained position in which the miner works. While not denying some influence to insufficient illumination, he considers it as a factor of subordinate importance. He does not believe it due to central changes. These views are somewhat at variance with those of other competent observers, especially as regards the importance of illumination. Miners' nystagmus would seem to be due to a "continued effort to fix under conditions which render continued fixation, peculiarly difficult," and the importance of each factor must be determined in each case. Sometimes a change simply in the manner of work, and not in its nature, is sufficient to give relief to this distressing condition, and the volume in question gives many valuable points as to prevention and treatment.

INFECTIVE ENTERITIS.

Gaffky (*Deut. Med. Woch.*, April 7th, 1892) reports the cases of two laboratory assistants and their servant who were seized on the same day with an acute illness. The chief symptoms were sudden onset with shivering, fever, diarrhœa, delirium, and prostration. In one case there was also albuminuria, and in another hæmorrhages into the mucous membrane of the mouth. In the third case the disease was mild. The poison had evidently entered by the mouth. Some milk was the only common article of diet of which these patients had partaken on the previous day, and which had been brought into the laboratory. The author had been making experiments with the bacilli found in cases of meat and sausage poisoning, but he does not think the milk could have been infected in this way, as it had only been in the laboratory a short time. It was found out that in the dairy from which this milk was obtained one of the cows had suffered from diarrhœa, small blood clots being passed. The dejecta, examined with all precautions by Professor Winckler, showed a very small and active bacillus. The same micro-organism was found by the author in the patients' stools. In cultivation and inoculation experiments it behaved somewhat differently from the micro-organism of meat poisoning. The author thinks that it was a culture of the bacterium coli commune of exceptional virulence and rapid growth, but he adds that much caution is needed in such conclusions, because the constant presence of this bacterium, pathogenic to many animals, makes it difficult to recognize other possible causes of disease in the intestinal contents. A specimen of the milk examined showed only micrococci innocuous to guinea-pigs. But the poison might have got into the milk otherwise than by the way of the mammary gland itself, that is, by the contamination of the milk by the dejecta, and the author says that this fact is not sufficiently recognized in the transmission of infective disease, even such as tubercle, to man. The boiling of milk is still insufficiently adopted.—*Brit. Med. Jour.*

EXOPHTHALMIC GOITRE.

Möbius, in an exhaustive article on this disease, draws the following conclusions: Basedow's disease is probably due to changes in the function of the thyroid gland. To prove this he mentions: (1) The similarity between this disease and others which depend upon changes in the thyroid, namely, myxœdema and cretinism. (2) The fact that in some cases exophthalmic goitre is secondary to simple enlargement of the thyroid. (3) That operative treatment seems in some cases to either benefit or cure the disease.

We know little or nothing about the causes which bring on the primary changes in the thyroid gland. It is probable, however, that the action of some poison on the system is an important ætiological factor. Among predisposing causes are the female sex, neurotic inheritance, possibly climatic conditions and national peculiarities. Under favorable circumstances those conditions which diminish the resistance of the body, more especially of the nervous system, seem to act as exciting causes.—*Deutsche Zeitschrift f. Nervenheilkunde*, Nov., 1891.

THE EFFECTS OF INFLUENZA UPON THE MIDDLE EAR.

Sir William Dalby, in a clinical note published in the *Lancet* of 20th of February, stated that a person with healthy ears has little to dread from influenza so far as the mucous membrane of the middle ear is concerned, but that it may become a serious trouble to one whose ears have formerly been the seat of inflammation. A correspondence on the subject will be found in subsequent numbers of the *Lancet*, in which the various writers agreed with the latter portion of Sir William's statement, but took exception to the first part. Each, from his experience of cases of middle ear inflammation following influenza in those who previously had perfectly healthy ears, took exception to the conclusion that "those with healthy ears had little to dread."

THE PATHOLOGY OF PARALYSIS AGITANS.

Borgherini (*Revist. sper. di Freniatria e Med. leg.*, 1891, vol. xvii, fasc. 1, 2) has reported a case of paralysis agitans, in which after death, on careful microscopic examination, an excessive formation of connective tissue was found in various parts of the cerebro-spinal nervous system, with pigmentation and atrophy of gray matter and ganglion cells. The walls of the capillaries were thickened, the lumen of the vessels was increased, and the perivascular lymph spaces were dilated. In many places miliary aneurisms were present. The lesions are thus those of senile involution.—*La Médecine Moderne*, 1891, No. 43, p. 746.

HIP-JOINT DISEASE AND SOME NEW LATERAL TRACTION SPLINTS FOR ITS TREATMENT.

Phelps, (*Med. News*, 1891, lix., 725.) writes:—To conclude, my observations lead me to believe that one of the most serious elements of destruction in hip-joint disease is the trauma and pressure produced by muscular spasm; that fixation of the joint without extensions is an impossibility; that the successful treatment of the joint must depend upon its absolute immobilization, which can only be produced by proper extension and fixation; that the constitutional treatment of hip-joint disease amounts to but little, independently of mechanical treatment; that mechanics is everything; that extension in the line of the axis of the shaft and in the time of deformity alone in hip-joint disease is entirely wrong; that extension should be made in a line parallel to the axis of the neck, in other words, two lines of extension; that ankylosis is not produced by immobilization, but by the severity and character of the inflammation; that the long traction hip-splints in general use neither properly extend nor immobilize the joint; that in a large percentage of cases the intra-articular pressure results in the destruction of the joint or in ankylosis; that the results in hip-joint disease should be as good as those in knee-joint disease and will be, provided perfect immobilization can be maintained; that patient should never be allowed to step upon any positive apparatus; that a high shoe in the well leg, and crutch, should be insisted upon until the patient is cured; finally, that the angular deformity seen in cured cases should not occur —such cases are a standing rebuke to the splint and methods employed.

TABES DORSALIS.

In a recent lecture at the Salpetriere, P. Blocq (*Gaz. Hebd. dé Med. et de Chir.* March, 1892) stated that recent researches upon the morbid histology of tabes in its first stage show that the internal radicular fasciculus is invariably the primary seat of the pathological change. The fibres of this system are thick, develop at a period of fœtal life anterior to the seventh or eighth month, and are the conducting paths of the muscular sense. The other fibers of the posterior root—slender and not apparent until the fœtus is near maturity—are the media by which cutaneous impressions are transmitted. From an evolutionary standpoint the muscular sense is inferior to the cutaneous sensibility its subservient neural elements consequently are the more prone to the influence of hereditary defect. This latter, he further considers, is the main ætiological factor in tabes, though often an accidental exciting agent, such as syphilis, can be discovered. In Friedrich's disease the heredity alone determines the occurrence of a lesion which at first is identical in situation and nature with that of early tabes.—*Brit. Med. Jour.*

THE ROUTE OF RESPIRED AIR THROUGH THE NOSE.

Kayser (*Arch. of Otol.*, xx, 1) asserts that during inspiration in the normal nose the bulk of the air passes along the septum, above the inferior turbinated bone, describing a semicircle in its course, and extending upward nearly to the roof of the nose. The general opinion that the current of air passes through the *pars respiratoria* is erroneous. The division of the cavity of the nose into a *pars respiratoria* and a *pars olfactoria* is permissible anatomically, but not justifiable physiologically.

DIAPHRAGMATIC HERNIA.

Niemöller (*Berl. klin. Woch.*, April 11th, 1892) relates the following characteristic case. A man, aged 25, had complained for six months previous to admission of nausea, vomiting, and loss of strength. He was thought to be suffering from chronic gastric catarrh of alcoholic origin, and dilatation of the stomach. A swelling of doubtful nature, but thought to be possibly a misplaced organ, was felt in the umbilical region. In three months' time the patient died. At the necropsy a tumor was found in the thorax immediately above the diaphragm and to the left side, of the size of a man's fist. It communicated with the stomach, for pressure on the latter caused it to swell. By pulling on the stomach, the protrusion could not be reduced, owing to the adhesions. The communication was through the tendinous part of the diaphragm. The much dilated stomach was covered in great part in front by the gastro-colic ligament, and the colon also crossed it. The pylorus instead of lying to the right of and below the cardia, lay to the left above. The part of the stomach near the pylorus formed the hernia. The spleen was displaced backwards, and there were many peritoneal adhesions. After referring to the fact that the condition is mostly made out only after death, the author draws attention to the percussion note over that side of the chest. He says that the normal percussion note is replaced by a tympanitic one, and that the height to which this latter extends depends on the gaseous contents of the stomach or intestine. Treatment can mostly only be symptomatic. These herniæ are divided into the congenital and traumatic. In the above case the increased abdominal pressure brought about by the vomiting forced the viscus through the defect in the diaphragm. The displacement of the organs, and especially that of the pylorus, unless due to peritoneal adhesions, was difficult to explain.—*Brit. Med. Jour.*

GLYCOSURIC, OR TRUE TABES.

Drs. Guinon and Souques, (*Archives de Neurologie*, March, 1892), state that in a glycosuric case if the nervous symptoms be limited to loss of the reflexes, fulgurant pains and loss of objective sensation, true tabes may be suspected, but is not demonstrated beyond doubt. Results of antiglycosuric treatment may aid, but not render certain, the diagnosis, since Westphal's symptom in diabetic cases is the last to yield to treatment. If it yield to treatment the presumption is in favor of diabetic pseudo-tabes. If glycosuria result in an ataxic case, then the absence of polyuria, variability of the amount of sugar, and absence of polyphagia and polydipsia, are in favor of a tabetic origin, especially if anæsthesia, frequent pulse and laryngeal crisis be present. If these last symptoms be absent the chances are in favor of diabetes, especially if the usual symptoms of diabetes be present. Diabetes may, however, complicate locomotor ataxia.

TUBERCULOSIS OF THE IRIS.

For some reason not easy to explain the iris is sometimes the seat of a local tuberculous process, the recognition of which is a triumph of diagnostic art. As to the identity of the lesion, there is no room for doubt, and it is highly important to decide how the bacilli got there and what is the prognosis. Hitherto tuberculosis of the iris has been generally regarded as a form of local tuberculosis, and the eye is consequently removed to prevent constitutional infection. This is a grave proceeding, and acquires additional gravity from the arguments advanced by Prof. Leber in support of the iritic effection being only a secondary, and not, as usually supposed, a primary lesion. He points out that the bacilla can only reach such a structure as the iris by one channel, viz., the blood, and the presence of the bacilla in the blood implies the existence of a focus of infection elsewhere in the body, in the glands,

the lungs, etc. Obviously if this be the case, enucleation of the diseased eye would not be justifiable on constitutional grounds. On the other hand, some few cases have been recorded of recovery after removal without any subsequent tuberculous manifestation. This fact may be interpreted in two ways—either as an argument in favor of the "local" view or as a reason for doubting the validity of the diagnosis. The latter reposes exclusively on the bacteriological examination of the diseased tissue, and it must be confessed that the alleged discovery of "one or two characteristic bacilli" hardly carries conviction. Pending further knowledge on this subject, it is to be hoped that no one will remove eyes on the ground of tuberculosis of the iris unless and until its functional integrity has been hopelessly compromised. —*Med. Press.*

PARALYSIS AGITANS IN A YOUNG MAN.

Quintard (*Bull. de la Soc. de Med. d'Angers*) has reported the case of a youth, sixteen years old, who presented the symptoms of paralysis agitans. Two years previously, following exposure to cold, tremor appeared in the right hand and continued for a month; while within two months the tremor had reappeared, now extending to the arm and shoulder. Soon the characteristic movements also involved the lower extremity upon the same side.—*Journ. de Méd. et de Chir. Prat.*, 1892, lxiii, 5, p. 182.

SURGERY.

ON RESECTION OF THE LIVER, ESPECIALLY FOR HEPATIC TUMORS.

Keen (*Boston Medical and Surgical Journal*, April 28, 1892) gives the results of analysis of twenty cases of resection of the liver.

The ages of these cases varied from 21 to 58 years. In striking contrast to age, sex is evidently a potential factor. Of the nineteen cases in which this was given, sixteen were females. The author thinks this frequency has probably something to do with tight-lacing.

The tumors and portions of liver removed have varied in size from a small nut to three fists. Of the twenty cases nearly all were incorrectly diagnosed. In some few cases floating kidney was diagnosed, while in others tumor of the pancreas was supposed to exist. The tumors found were echinococcus and hydatid cysts, cancer, syphilis, sarcoma, and adenoma.

The author thinks, as a result of experiments on animals, a large portion of the liver can be removed without interfering with its function and without any unreasonable danger.

Ponfick found that even the removal of three-fourth of the liver could be recovered from, although the prostration was very severe at first. Von Meister relates that when the above amount is removed, within a space of thirty-six days, repair had advanced to such an extent that the original weight of the organ was regained.

The escape of bile in the peritoneal cavity is generally of no consequence.

In preventing hæmorrhage the base of the tumor is severed by repeated small touches of the cautery point, the large vessels all being ligated. The stump, in the majority of cases was returned to the abdominal cavity; while in six cases it was sutured in the abdominal wound.

Of the twenty cases seventeen recovered, two died and in one the result was unknown. The mortality thus far has only been ten per cent.—*Univ. Med. Mag.*

CONTRIBUTION TO THE TREATMENT OF EPIDIDYMITIS WITHOUT RESTRICTION OF EXERCISE, WITH A SKETCH OF A SIMPLE BANDAGE.

Philippson (*Theurapeutische Monatshefte*, April, 1892,) describes a new treatment of epididymitis which allows the patient perfect freedom to go about. The principles of his treatment are:

(1) Compression of the testicle, which causes the inflammatory swelling rapidly to disappear.

(2) Puncture of the tunica vaginalis. Sometimes compression alone is indicated, while in other cases puncture and compression may be necessary.

As a dressing iodide of lead plaster was first tried, but this had the disadvantage of producing excoriations. He then used suspensories. It was found difficult to get two alike, and they were rather difficult to adjust. One of two methods of compression, by means of bandages, may be used:

(1) Two flannel bandages, quite elastic, and two circles,—one of flannel, the other

of gutta-percha. One bandage first draws down the testicle from the inguinal canal. The two circles are then placed underneath the testicle and covered by succeeding turns.

This method often produces unbearable pain.

The author recommends the following:

(2) A flannel bandage, three metres long and three centimetres wide is used, the first turn being applied above the testicle. This end of the bandage he allows the patient to hold until the following circular turns are firm enough to hold it and prevent the testicle from slipping up towards the inguinal canal. The dressing is then completed by alternate circular and spiral turns of the bandage, and the two ends fastened together with a safety pin, and the whole surrounded with a suspensory bandage. This dressing may be reapplied daily.—*Univ. Med. Mag.*

INTUBATION FOR THE RELIEF OF STENOSIS OF TUBERCULAR LARYNGITIS.

Dr. F. E. Hopkins reports a case which was successful so far as the relief of the stenosis was concerned (*New York Medical Journal*, 1892, No. 691, p. 334). Massei has operated in three cases and Dillon Brown in one case, for the purpose of securing euthanasia. It seems likely that this operation, on account of ease and quickness, the comparative absence of shock, the absence of wound in tissues predisposed to necrosis, and the possibility that after a short time the tube may be dispensed with, ought always to be chosen instead of tracheotomy.—*Amer. Jour. Med. Sci.*

A CASE OF PORENCEPHALON.

Lloyd and Willard (*Amer. Jour. Med. Sci.*, April) report a case of porencephalon in which trephining was done for the relief of local symptoms, with death from scarlet fever. The patient was a boy, aged 7, with bilateral spastic hemiplegia, the right arm was the seat of athetoid movements, the legs, like the arms, were in a spastic condition, the knee-jerks were exaggerated, and ankle clonus was well marked on the left side. His general physical condition was good, but his mental condition was slightly impaired. His head was asymmetrical, but there were no scars or depressions. He came under observation in October, 1891, and a month later had a series of convulsions, after which the athetoid movements of the right arm were more noticeable and his mental faculties were weakened. There was absolutely no history obtainable as regarded his early life. It was determined to trephine over the motor area on the left side. When the dura mater was incised a considerable amount of cerebro-spinal fluid escaped and the finger entered a vast cavity, so that evidently a large portion of the cerebrum was absent. Scarlet fever developed on the third day after the operation, and the child died from its effects on the nineteenth day. On *post-mortem* examination a large porencephalon was found involving the left Rolandic region, extending anteriorly beyond the prefrontal fissure downwards almost or quite to the operculum, backward to include the superior parietal lobule, its area thus coinciding very closely with the area of distribution of the middle cerebral artery. In the mid-region of the cavity was a large crater-like opening extending into the lateral ventricle. The authors express the opinion that vascular disease or injury must have been the origin of the cavity in the brain.—*Brit. Med. Jour.*

SPONTANEOUS CURE OF DETACHED RETINA.

Marchetti (*Rif. Med.*, January 16, 1892) reports the following case: A man, æt. 55, observed during November, 1890, that the vision of his left eye was becoming dim. This dimness increased very rapidly, and in four days there was left only perception of light. Examination revealed extensive detachment of the temporal and frontal portions of the retina, and of a great part of the nasal portion. The detachment fluctuated in the lower portion with the ocular movements; in the other parts it was distended in folds. Tension was reduced, vitreous transparent, and disc normal. Vision was restricted to P. L., and perception of movements of the fingers in the temporal section of the field of vision only. Vision had been previously good, but each cornea had a central leucoma, the remains of inflammation many years previously. He was treated with pilocarpine injections and iodide of potassium, and advised rest in the horizontal posture. In February, 1891, having continued the treatment till then,

the eye was in the same condition, when quite suddenly on the 16th, he regained his sight. This followed, apparently, on a sudden rotation of his head towards the right side, the patient feeling immediately, as it were, a blow on his useless eye. directly after this he found that he could see objects distinctly and without any difficulty, and eight days after he could read small type quite easily. In June, when he again presented himself for opthalmoscopic examination, there was a light grey streak corresponding to the detachment, but no displacement whatever remained. The field of vision was nearly normal, save for colors, and the acuity nearly as good as before, having regard to the existence of the old leucomata. The author is inclined to attribute the sudden cure to a rupture of the detached portion, with escape of the subjacent fluid.—*Brit. Med. Jour.*

THE TREATMENT OF RECENT TRANSVERSE FRACTURES OF THE PATELLA.

Butcher (*British Medical Journal*, April 30, 1892) describes the following method of treating transverse fractures of the patelia:

The fragments are at first adjusted by the hands of an assistant and then a stout, curved, pedicle needle, armed with a long, stout, silk ligature, is passed through the skin about the centre of the outside of the knee, then pushed slightly upward subcutaneously until it reaches the upper border of the patella; the needle is now thrust through the quadriceps tendon as near to the upper part of the bone as possible. The point of the needle is then depressed and the skin on the inner side of the joint drawn up and the point of needle then thrust through and withdrawn, leaving the silk ligature in place. The needle is again passed as before from the outer side of the joint through the same opening and directed slightly downward until the lower edge of the lower fragment is felt. The needle is then thrust through the ligamentum patella, the skin in the inner side of the joint being drawn down and the point forced through the same puncture that is already occupied by the silk ligature. The needle, having been passed unarmed, is now threaded with the end of the silk ligature and then withdrawn, with the result that the silk disappears through the opening on the inner side of the knee and the two ends appear at the same opening on the outer side. The fragments are then rubbed well together so as to secure perfect apposition by the breaking up of clots, that may have intervened. The ends of the ligature are then drawn tightly together and knotted, with the result that the knot slips through the puncture. This ligature entirely surrounds the patella subcutaneously. There is no wound to dress and the joint is not interfered with. The joint is then dressed on a posterior splint and motion is not permitted for about ten days.—*Univ. Med. Mag.*

A NEW APPARATUS FOR THE TREATMENT OF SCOLIOSIS.

Schede (*Deutsche medicinische Wochenschrift*, No. 12) advises the apparatus here described in the treatment of scoliosis, and believes that more can be accomplished by this means than by measures formerly adopted.

The apparatus consists or a framework made of gas-pipe, consisting of four upright posts, joined together on three sides by cross-pieces. There are arranged two padded horizontal boards, which are movable, to hold the pelvis firmly. The anterior one is so padded that the symphysis remains free from pressure, so the development of the antero-posterior diameter of the pelvis is not unfavorably influenced. There is an upright bar from which is suspended the head-swing, held by a chain carried over two simple pulleys. A movable horizontal bar is also attached to this bar. By means of a screw it is put at such a height as will put the arms on the stretch when the head is in suspension. To the vertical rod is attached a ring made of gas-pipe of a size sufficient to go outside of the body of the patient. This ring is so arranged as to be readily raised or lowered. In this ring several upright rods are fastened which carry long horizontal screws with large pads on the end next to the body. Two of these pads act as shoulder-supports, which are provided with straps.

The others are used to make pressure and counter-pressure on the thorax with the view of correcting the deformity. To overcome the torsion, rubber adhesive plaster is placed on the back and sides of the patient; to this plaster is attached a cord which runs over a pulley on a level

with the attachment to the plaster, and pulling in a direction to overcome the deformity. Three to ten pounds are placed on the other end of the cord. The function of this is assisted by the pressure-pads, which, being on screws, are adjustable.

The head-swing is elevated until the patient rests on his toes. Half an hour is spent in the apparatus morning and evening.

Two cuts are inserted which greatly aid in elucidating this apparatus.

In bad cases a plaster of Paris bandage may be applied during the night, covering the pelvis and even part of the thighs.—*Amer. Jour. Med. Sci.*

OBSTETRICS.

TANGLING OF THE UMBILICAL CORDS IN TWINS.

Hermann (*Archiv für Gynœkologie*, Band XL., Heft. II.) describes the specimen from a case of knotting of the cords in twin pregnancy. The knot was between the first and second cords reckoned from the navel. Hermann believes that this condition, which occurs once in 5–6,000 pregnancies, is produced by long-continued violent movements of the body of the mother, as in dancing, riding, vomiting in the beginning of pregnancy, etc. The prognosis of tangling of the cords is extremely unfavorable for the children. In fifteen cases collected by him the pregnancy was interrupted eleven times and only one child was born living. In the other four cases, where the labor followed the regular end of pregnancy, five children were born living and three dead. The diagnosis of this condition during pregnancy is as impossible as its treatment. —*Univ. Med. Mag.*

DEATH AFTER RETROFLEXION OF GRAVID UTERUS.

Treub (*Centralbl. f. Gynäk.*, No. 19, 1892) observed an almost moribund patient with incarcerated gravid uterus and symptoms of acute peritonitis. There had been no defæcation for five days; vomiting had set in thirty-six hours before Treub saw her, and the bladder had been emptied twelve hours previously by the catheter. The uterus was replaced, but the patient died in two hours. At the *post mortem* the colon was found to be compressed by the gravid uterus, and it was already gangrenous. Acute peritonitis had followed this complication. Treub has collected fifty fatal cases of retroflexion of the pregnant uterus, and in no case was death due to gangrene of the intestine. The recorded causes of death were: uræmia, exhaustion, 13 cases; rupture of bladder, 11; septicæmia, 6; peritonitis after cystis, 10; pyæmia, 3; rupture of the peritoneum, 2; malpraxis, 5. Many cases, moreover, must have escaped observation or publication; nevertheless, it is not likely that sloughing of compressed intestine is otherwise than a very rare cause of death under the circumstances.—*Brit. Med. Jour.*

INHALATION OF OXYGEN IN OBSTETRICS.

Riviére (*Nouv. Arch. de'Obstét. et de Gynéc.*, April 25th, 1892) has found, as the result of much experience, that inhalations of oxygen are valuable under many circumstances, both for mother and child. Thus inhalation is serviceable in counteracting the evil effects of chronic or acute thoracic diseases during pregnancy, which so often cause abortion or premature delivery. In uncontrollable vomiting and anorexia inhalations, are also useful. After delivery inhalations superoxidize the blood, which appears to enable that fluid to resist sepsis. When a pregnant woman is ill or weak, inhalations always profit the the fœtus, whose nutrition is thereby improved. Rivière goes so far as to contend that the method is of service in placental diseases, or even in partial detachment of the placenta; it allows, he believes, more complete oxidation of the fœtal blood in the diminished area of sound placenta that remains. Altogether, however, he admits that inhalations are of more benefit for new-born children, whether they be emaciated from some cause which existed before birth, or continue to be thin for some period after delivery, owing to malnutrition.—*Brit. Med. Jour.*

GYNECOLOGY.

EUPHORIN IN GYNÆCOLOGICAL PRACTICE.

Bergerio (*Gazz. d. Osp.*, April 7, 1891) has tried the effect of topical applications of euphorin in 20 cases of ulcerative cre-

vicitis, in 4 of which the condition was complicated by eversion of the mucous lining of the crevix; after five or six applications the lesions were on the way to cure. He also used the drug in powder by insufflation and in a 1-in-3 alcoholic solution, and in this way cured some cases of septic endometritis. In order to avoid confusion, no other disinfecting agent was used at the same time, all washing out of the genital canal being performed with sterilized water.—*British Medical Journal*, suppl., April 30, 1892, p. 71.

THE TREATMENT OF UTERINE MOLE.

Fritsch in remarking upon the above case, describes his treatment in his own practice, and considers active interference strongly indicated. He employs the curette as soon as possible, as the safest and most efficient means of checking the hæmorrhage and terminating the case.

INTESTINAL OBSTRUCTION DUE TO DISPLACEMENT OF THE UTERUS.

Nélaton (*Nouvelks Archives d' Obstétrique et de Gynécologie*, 1892, No. 2) reports the case of a woman, aged twenty-eight years, previously in good health, who during a menstrual period was seized with colicky pains in the abdomen and vomiting, which persisted for three days, efforts to move the bowels being unsuccessful. Tympanities was excessive. On the fifth day gas escaped *per rectum*; on the eighth, the patient had a fluid movement, and no further observation was noted until the menses reappeared, when the symptoms of intestinal occlusion again developed. A rectal examination now revealed a cicatricial mass compressing the rectum at a point two and a half inches above the anus; the induration was continuous with the uterus, and was thought to be the remains of an old hæmato-salpinx. It was situated so deeply within the pelvis that it seemed to be more accessible through a vaginal than through an abdominal incision. The cul-de-sac of Douglas was opened from below, and adhesions attaching the retroflexed uterus to the rectum were divided, when the former was readily replaced. Examination *per rectum* then showed that the obstruction had been removed. The patient was discharged at the end of two weeks, and never had a return of the trouble.

Segond (*Ibid.*) reports the case of a patient, aged thirty-six years, who presented all the symptoms of acute intestinal occlusion. Under chloroform, a retroflexed uterus with a supposed fibroid at the fundus was replaced, by introducing the entire hand into the rectum, and the obstruction was overcome. Several months later vaginal hysterectomy was performed, and the tumor proved to be an ectopic gestation, which was removed successfully. —*Amer. Jour. Med. Sci.*

PEDIATRICS.

THE RADICAL CURE OF INGUINAL HERNIA IN CHILDREN.

Broca (*Revue Mensuelle des Maladies des l'Enfance*, April, 1892) describes the operative treatment of inguinal hernia in children, with report of seven cases.

This operation is of little importance in very young children.

(1) The tissues are thin and delicate.

(2) The parts are small and difficult to reach.

(3) A thorough anatomical knowledge is necessary.

Through fear of operations many surgeons have adopted other measures—especially the application of a bandage. This sometimes does result in the cure of these cases, but its application must be continued from two to three years. If the hernia be complicated by ectopion of the testicle, then operation must be resorted to. Operation in very young children—from one to three yeaas—would only be justifiable where a gradually-increasing hernia should suddenly become irreducible or strangulated. Strangulation is a rare condition at these ages. Colotomy was formely done in very young children for strangulation, with considerable success, but Broca believes the operation is rarely if ever necessary. Sometimes strangulated hernia can be reduced by pressure and carefully-applied taxis.

Two reasons are given by some authors why operations in earlier years should not be performed.

(1) Operations in children up to five years are generally grave.

(2) Before five years the continued use of the bandage generally cures.

But if great care should be taken during the operation and in the after-treatment of the wound there is but little danger. A congenital hernia, without being a pro-peritoneal hernia, may have a dilatation, retro-peritoneal or pro-peritoneal. These conditions were found in four adults operated upon. He thinks that pressure will cause obliteration of the inguinal canal; but how can that possibly effect this pro-peritoneal pocket.

Of the seven cases reported, the ages varied from five months to twelve years. One case at five months was cured by means of a bandage. The remaining six cases were all operated upon, and only one was complicated by ectopion of the testicle. All the cases resulted in cures in from four to eight weeks.—*Univ. Med. Mag.*

EXTIRPATION OF LARYNGEAL PAPILLOMA IN CHILDREN THROUGH A FENESTRATED TUBE.

Lichtwitz (*Arch. Clin. de Bordeaux*, No. 4, 1892) has successfully treated papilloma of the larynx and the upper part of the trachea by introducing a fenestrated tube. The position of the growth is first determined with the laryngoscope, and a tube of the pattern of O'Dwyer's tubes, but having a fenestra at a point corresponding to the point at which the growth is attached, is introduced in the ordinary way. The papilloma ought then to project into the tube. The operator introduces, with a finger as guide, a forceps or a *porte-caustique*, and removes or cauterizes the growth. The tube should be cylindrical and should have thin walls, and should be blackened on the inner surface. Examinations made on the dead body showed that the upper border of the tube always rested on the ventricular bands, and that the neck of the tube corresponded to the vocal cords. By noting this it was possible to cut the hole in the tube at a point corresponding very accurately to the site of the papilloma. As these growths are generally situated anteriorly, it is best, if the tumor cannot well be seen with the laryngoscope, to introduce a tube with an anterior fenestra, in the hope that the growth may project through it. If this fails, still more information is almost sure to be obtained. One case is related (a girl aged 4½ years) in which a mass of papilloma in the anterior commissure was removed piece-meal at six sittings, and the base cauterized.—*Brit. Med. Jour.*

HYGIENE.

THE BACTERIA OF MELONS.

Dr. Byron Halstead in the *Botanical Gazette*, November 11, 1891, describes a disease of melons and cucumbers on specimens from Bangor, Maine, and the central parts of New Jersey. To prove that the diseased plants were suffering from the results of the life of micro-organisms, numerous inoculations were made with the bacteria found in the diseased parts. The result was conclusive. The inoculated parts soon rotted and became affected in the same manner in which the original disease presented itself. Experiments were conducted also with seeds. Two lots, consisting of sixteen seeds, had been planted in two different pots, both of which were placed in the same conditions and surroundings. One of the pots was watered with water containing these bacteria, and only two germinations resulted, both of which died shortly, while in the other pot watered with pure water, the germinations produced good plants.—*Annals Hygiene.*

THE BEHAVIOR OF ANTISEPTICS TOWARD SALIVARY DIGESTION.

Under the above title Prof. Weber, of Columbus, Ohio, publishes in the *Journal of American Chemical Society*, January, 1892, the result of tests made under his direction by C. T. Fox. The agents used in the experiments were borax, salicylic acid, calcium sulphate and saccharine. The tests were made with one grain of starch in 15 c. c. of water, and 5 c. c. of saliva, with various amounts of antiseptic, and with varying times, ranging from 1 to 60 minutes. The effect was determined by estimating the sugar formed with the starch alone, and with the antiseptic added.

It was found that when the antiseptics were present in the proportion of 1 to 210 parts of the mixture, the diastasic action of the saliva was entirely arrested by all these agents during the first five minutes.

For the longer times, calcium sulphite was without effect, while borax retarded the action, and salicylic acid and saccharine completely arrested it. These last two agents prevented the action of saliva upon starch when present in the proportion of 1 in 420. Salicylic acid greatly retards the action when present in the proportion of 1 in 840; but not when the proportion was reduced to 1 in 1050. Saccharine showed no effect when the proportion was reduced to 1 in 840. Calcium sulphite failed to retard the action when present in the proportion of 1 in 420. Borax showed a great retarding effect, even in the proportion of 1 in 2100. These experiments were undertaken to determine the effect of the various preservatives for food containing them, and showed that mixtures containing them should not be permitted to be added to articles of food.

MEDICAL CHEMISTRY.

A TEST FOR THE PURITY OF TEREBENE.

A dispensing query which appeard in a recent issue of the *Chemist and Druggist* has suggested to Harold Wyatt, Jr., the following test as a ready means of detecting the freshness of a given sample of terebene:

℞ Iodide of potassium.....20 grains.
Compound powder of tragacanth (B P.)..... .....60 grains.
Boiling water to..... 8 ounces.—M.
Allow to cool before using.

Fifteen minims of the suspected liquid are added to 1 ounce of this test solution contained in a glass-stoppered bottle, and the whole set aside with occasional agitation for one hour, at the end of which time if a blue color makes its appearance the sample is considered bad.

The results vary somewhat with different terebene and turpentines, as the following table shows:

	1 hour.	12 hours.	24 hours.
A. Terebene.....	No color.	No color.	Pink blue.
B. Terebene.....	Faint pink.	Blue.	Dark blue.
C. Ol. terebinth rect...	Blue.	Blue black.	Blue black.
D. Ol. terebinth, comm.	Purple.	Blue black.	Blue black.

Sample A was from a well-known firm, and had been sent ont in 1 ounce capsuled bottles, so that the chances of oxidation were greatly diminished. Sample B was from the dispensing counter, and was contained in a 1-pound bottle three-fourths full.

Mr. Wyatt adds that if oil of lemon be old it will react in the same way as terebene, but fresh oil has no reaction. This might be useful as a guide to the quality of oil of lemon, one more trustworthy, perhaps, then the sense of smell alone.

The color produced in this test is, of course, formed by the reducing action of the $H_2 O_2$ contained in all old samples of turpentine and terebene, on the iodide of potassium and the subsequent formation of iodide of starch.

IODIDE OF CYANOGEN.

This poisonous compound, which is soluble in water or alcohol, has been recommended by Prof. Kobert as an efficient destroyer of all lower animals. A recent report of E. Merck recalls this fact, and suggests its use for the preservation of zoölogical specimens in general, etc.

It is to be stated that general caution must be exercised with this substance, since it is notably volatile even at the ordinary temperature. For this reason, also, its use as a permanent preservative of the objects before mentioned is rather problematical.

NEWS AND MISCELLANY.

"CHICAGO MEDICAL RECORD."

Chicago Medical Record, edited by Dr. Archibald Church, and previously published by W. T. Keener, of Chicago, is now being published by that well-known house, the M. H. Kauffman Medical Publishing Co.

CRAWFORD COUNTY, PA., MEDICAL SOCIETY.

At a meeting of the Crawford County, Medical Society, held July 5, 1892, the following actions were taken:

WHEREAS, The practice of criminal abortion is steadily increasing, and, in the numerous cases which prove fatal, it is next to impossibile to secure the conviction of the guilty party, because the testimony of the female—who is usually the only available witness in the transaction—is not received by the courts, whereby the evil-doer not only escapes punishment, but is encouraged in his work, therefore be it

Resolved, That we petition the Legisla-

ture of this State, at the coming session, to enact a law by which the dying declarations of a person, who may die from the effects of a criminal abortion, shall be received as evidence on the trial of any one indicted for the same as is now done in cases of homicide.

Resolved, That a copy of this resolution be sent to the various county medical societies of the State for concurrent action, and a copy also to each of the medical journals published within the State.

J. M. Cooper, M. D.,
Secretary.

A SLUR ON THE MEDICAL PROFESSION OF CHICAGO.

The *British Medical Journal* says: "Slow going Europe was much amused at the characteristic official methods employed at Chicago to meet the unpleasant effect produced by the publication of the figures representing the epidemic and endemic prevalence of typhoid fever in that city, and the extensive pollution of the lake water with which the city is served. There were 2,000 deaths reported from typhoid fever in 1891, and 311 deaths from typhoid in January of the present year. There was also evidence that the sewage of a city of some one hundred and eighty thousand persons passes directly into the lake, and that further pollution is brought about by means of the Chicago River, which communicates with the Mississippi as well as Lake Michigan. The simple reply made to this was that the doctors did not know how to diagnose typhoid fever, and that probably not more than four hundred out of four thousand cases so reported were correctly entered. We have been waiting with amused wonder for the response of the maligned medical faculty to this serio-comic retort, which would only be regarded as a bad and foolish joke in any other civilized city, whether of Europe or America. Meantime, it is instructive to note that instead of giving solidity or confirmation to the promise held out by Mr. MacCormach, the Commissioner in Great Britain, that the sources of water supply would be, in good time before the Exhibition, carried two miles further out into the lake, the *mot d'ordre* appears to be to give this significant hint to the doctors that for the future they had better register what they have been in the habit of recognizing as typhoid fever under some other name. This will not, however, diminish the mortality, nor will it add to the confidence with which future and, perhaps, more reassuring returns will be regarded by intending visitors to the Columbian Exposition."

INCREASED DRUNKENNESS IN WOMEN.

It is a matter of common belief that drunkenness in women is increasing very much. This view has received confirmation at an inquest a few days ago touching the death of Mary Zeig, aged sixty-seven, an habitual drunkard. Dr. Norman Kerr testified that death was due to apoplexy consequent on habits of intemperance. She had been drinking three weeks continually, and on Friday had gone to a public-house and taken a quantity of rum. Dr. Kerr said he had never seen such a number of drunken women as in the Whitsuntide holidays. He had frequently seen groups of four or five—some quite young—in a state more or less intoxicated. He could only attribute it to the hot weather. We are afraid the cause lies deeper than in the weather. Dr. Danford Thomas stated that he had held lately an increased number of inquests upon women, many comparatively young, whose death was clearly due to alcoholic excess. This kind of evidence is very serious, and emphasizes an evil which is about to be inquired into by a Department Committee. The jury were affected by the representations of the coroner and Dr. Kerr, and urged on the Committee the urgent necessity of compulsion in the treatment of chronic inebriates. The existing law is entirely inadequate. It is of use only to the wealthy, who can afford to go to retreats, and to those who have self-respect enough left to go voluntarily. Dr. Kerr suggested the creation of a special prison for the compulsory treatment of such cases. It might be called by some other name. But the suggestion is in the right direction and should be seriously considered by the committee. The condition of our chronic inebriates, and of the laws relating to them, are disgraceful to us, and deserve the anxious attention of statesmen of all parties. —*Lancet.*

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Clinical Lectures.

PELVIC INFLAMMATION, SALPINGITIS AND PERITONITIS; UTERINE DISPLACEMENT.

By PROF. M. D. MANN, M. D.,
BUFFALO GENERAL HOSPITAL.

Gentlemen:—This patient I show you is a married woman, aged twenty-seven, who has had one miscarriage and six children at term, the last two years ago. She got up in two or three days after her last confinement and she has never been well since. The history of the case is quite a typical one. She entered the hospital last February complaining of pain in the left side, which began when she first tried to work after her last confinement, and of dragging pains in the back so severe that she was incapacitated. An examination revealed a large laceration of the cervix which was operated upon by one of my colleagues, circumstances at the time conspiring to make the operation a rather long one. The cervical wound united very nicely but, whether because of the length of the operation or not I do not know, a violent attack of pelvic inflammation including salpingitis and peritonitis occurred on the left side. Undoubtedly the woman had had a slight inflammation there previously to entering the hospital and the traction on the cervix lighted this up into an acute attack. This is one of the unfortunate results of operation on the cervix and I do not believe that it can be occasioned *de novo* by the manipulations necessary to the operation. At one time the patient's life was despaired of but she recovered and left the hospital in September.

I now find the cervix in perfect condition but there is a large mass of cicatrical tissue on the left side of the pelvis behind the uterus. It is as hard as cartilage and evidently consists of a mass of adhesions probably involving the tube within the peritoneum. The uterus is somewhat movable but not as much so as it should be and the parts are all very tender.

In this case the attempt was made to improve the woman's condition by repairing the cervix and while the question is no longer one of cervical lesion, it is doubtful if on the whole she has been benefited by the operation. We must remember such cases as this in advising trachelorraphy for these unpleasant results may follow an operation at which we suppose we have used the utmost care and gentleness. In considering what can be done to relieve the present state of affairs we must bear in mind that the woman is poor, that she is looked to to do the housework for a husband and six small children, that she is unable to work and that unless she can be restored to at least a fair degree of health she must remain an object of public charity while her family will be deprived of her services. She has been nearly a year under treatment, and, as you can see, without the improvement which we desire. I am convinced, therefore, that nothing short of a laparotomy will avail to relieve her from her present condition of invalidism. At the operation it will be necessary to break up adhesions, to remove the tube and ovary of the left side if they are diseased, as they undoubtedly are, and to put the uterus in its right place, fastening it there, it may be, by sutures and thus giving the woman a chance to recover her health. There is no history of gonorrhœal or of septic infection in this case and we have not a pus-tube to deal with but simply a chronic inflammation of the tube and peritoneum with the formation of cicatrical tissue. We may hope, therefore, by laparotomy and careful after-

treatment to improve very materially the patient's condition.

UTERINE DISPLACEMENT.

This patient comes to us from the Fitch Dispensary for an opinion with regard to her case. I have not seen her before and she speaks no language but German, but I will try to get the history of the case from her own lips. I do not know whether she will allow an operation or not.

She has had five children, the youngest nineteen months old, she has been sick three years, complaining of back-ache in the region of the sacrum, of pain in the middle of the abdomen and of leucorrhœa. Her menstruation anticipates; it stops and comes on again and sometimes it lasts eight or ten days and she loses considerable blood. If she works at all at the time she suffers a great deal of pain but otherwise she gives no history of painful menstruation. She is not obliged to go to bed at the time of her menstruation but simply to refrain from work. She says that now there is a period of three weeks between the catameniæ which last, ten days. This would make the epoch rather too long but we cannot rely too implicitly on the statements of women with regard to this function for even the most intelligent often make no mental note whatever of such things and cannot tell how often the periods occur nor how long they last.

She willingly consents to a digital examination and I find a lacerated cervix and enlargement of the uterus with backward displacement and some true collapse. The uterus is very movable, there having been no pelvic peritonitis to cause adhesions. The condition is about what we would expect from the history though we must bear in mind the fact that the history and subjective symptoms afford little clue to the exact anatomical condition existing in the pelvis. This is a common kind of case but the every-day cases are really much more instructive than the more interesting cases which we may not see exemplified more than once in a life time.

What was the order of events in this case? The probability is that the laceration of the cervix occurred before the other lesions and perhaps at the first of the labors. As a result, the uterus remained large, involution not fully taking place. Not only is the uterus subinvoluted but the ligaments and the vagina are subinvoluted, for the process is one which affects the other pelvic organs as well as the uterus. All the conditions are now favorable to displacement, the uterus being heavy and the ligaments, vagina and structures of the pelvic floor being relaxed. If, as in this case, there is in addition a tear of the perineum the support of the uterus is further weakened. The patient is a poor hard-working woman who has probably carried coal, done washing and strained herself in various other ways and in such a case it is only a question of time when the uterus will be forced backward in retroversion and downward in prolapse. These repeated strains will cause the uterus to keep coming down and in a little while the patient may find it outside the vulva. Then will come interference with the rectum and constipation and this in turn will necessitate bearing down and the increased pressure on the uterus will cause it to drag on the rectum and produce rectocele. In like manner a cystocele may follow and so things go from bad to worse. If, however, a woman with this trouble in an early stage is in a position in society so that she can rest and lie about on a lounge instead of being on her feet and engaged in hard work, she may drag along in comparative comfort and even recover spontaneously in course of time.

Menstruation tends to make worse the condition of a subinvoluted uterus, for it causes a periodical increase of the chronic congestion of the uterus. Hyperplastic growths are liable to occur in the endometrium and each menstrual period becomes a little longer than the last before it and more blood is lost so that anæmia gradually develops. The woman may fight against this if she has a good constitution and plenty of will-power, for a long time but she will generally back down in the end. This is not a very pleasant prospect for a woman and if we can relieve her and stop this downward career, it will certainly be very much to her advantage. In the present instance I think we can do so. The first step is to sew up the laceration in the cervix which is doing harm by preventing involution and it also lengthens out the vagina by just so much since the lips of the cervix are spread out. In this case there is no danger of lighting up a pelvic inflammation by this operation. By uniting the lips of the cervix, we take

up the slack in the vagina to a certain extent. Moreover the process of healing depends upon a change in the circulation which will favor involution. The perineum is not so much torn that a pessary cannot be retained and by introducing one as soon as the cervix has fully healed we can hold the uterus in place. If the peritoneum were badly lacerated we could restore it at the same time that we operate upon the cervix. If by passing the curette we find a polypoid endometritis with hyperplastic growths we will thoroughly scrape out the uterus and remove the growths. This will relieve the congestion and reduce the weight of the uterus. We may do this at the time we repair the cervix. Under this treatment the patient will in all probability get better and better. Will she ever be able to get along without the pessary? Sometimes that is the case. I examined a lady yesterday with just such a history as this patient gives. She wore a pessary for two years and then discontinued its use. It has been out for some months now and the displacement shows no tendency to return.

Even by the comparatively simple methods that I have indicated, the uterus regains its normal tonicity in many cases, while in others it remains large and heavy and it is necessary to perform some operation to hold it in place, either by shortening the round ligaments from without or from within. Many women will get along very well for years with the pessary and they often will not submit to a radical operation.

THE USE OF THE CONSTANT ELECTRIC CURRENT IN THE TREATMENT OF INTESTINAL OCCLUSION.

Dr. M. Semmola (*British Medical Journal*, 1892, No. 1625, p. 380) reports a case in which it was shown that there was an intestinal occlusion due exclusively to transient intestinal parlyasis through edfective innervation, in which the constant electrical current had a truly marvellous effect. The positive pole was, by means of a rectal catheter, carried into the bowel for about ten inches; the negative pole, olivary in form, covered by a cloth moistened in a saturated solution of chloride of sodium, was rubbed transversely over the surface of the abdomen for eight minutes thrice daily. Success followed after the first day of treatment.—*Amer. Jour. Med. Sci.*

Communications.

MORPHINISM IN ITS RELATION TO THE SEXUAL FUNCTIONS AND APPETITE, AND ITS EFFECT ON THE OFFSPRING OF THE USERS OF THE DRUG.

By T. J. HAPPEL, A. M., M. D.,
TRENTON, TENN.
EX. PRES. TENN. STATE MED. SOCIETY, AND PRES. OF THE WEST TENN. MED. AND SURG. ASSOCIATION.*

In an article by Lancereaux, of Paris, in which he describes the condition resulting from the long continued and excessive use of morphine, he says: "The special senses are not particularly injured, but the sexual appetite is abolished; the female becomes sterile, and ceases to menstruate; according to Loeinstein, her entire uterine apparatus may become atrophied. It is claimed that fatty degeneration of all the organs takes place."

Dr. Henry Lyman, of Chicago, referring to the effect of the use of morphine on the sexual apparatus, states that a characteristic phenomenon of the period of convalescence is a renewal of the sexual appetite: it being not infrequently exaggerated to an injurious degree. As to the truth or falsity of ALL these statements I am not fully decided; but that the female becomes sterile, and ceases to menstruate, I am prepared to most positively deny and prove. The existence of a sexual appetite or passion is generally denied by females, whether users of morphine or not. They are unwilling, in the better class, to admit the existence of such a passion, hence it cannot be safely asserted by any one that it has been abolished.

The long continued use of morphine *may* hasten the menopause, and hence hasten the atrophy of the uterus and its appendages, but, in the course of this article, I hope to be able to prove to the satisfaction of every one that women who use it at the rate of from eight to fifteen grains a day *may* and *do* menstruate, *may* and *do* conceive, and bear children at full term.

* Read before the Tenn. State Medical Society at its Annual Meeting in Knoxville, Tenn., April, 1892.

Case I.—Miss ——— had used morphine from 1873 up to the time of her death in 1890, 17 years. For the last ten years *confessed* to using one bottle (℥i) per week. It could safely be estimated that the amount used was at least ten to twelve grains daily. She began the use of morphine after she began to menstruate, before her uterus fully developed.

At irregular intervals, during her seventeen years use of the drug she menstruated.

Several examinations of the uterus were made during the last ten years of her life. A condition of hyperæsthesia of the vagina existed amounting almost to vaginismus. The uterus was found to be about 1½ to 2 inches in depth. Of course I could ascertain nothing about the sexual appetite in this case, though another female in the family, who used less morphine confessed to the habit of masturbation.

Miss ——— finally died of abscess of the lung.

Case II.—Mrs. ———, a widow, had for a long time been a user of morphine to excess. I have had no way of ascertaining in her case the quantity used. Suffice it to say, in regard to the loss of sexual appetite, and the question of sterility, that it was reported that she frequently cohabited with men, and was finally delivered of a child, which lived for a short while, probably one year and then died.

Case III.—Mrs. X, married, used morphine, though not very excessively for two or three years. She became pregnant, and was delivered of a fine, large child which throve and grew rapidly, but died during its first summer.

Since the death of that child she has never conceived, but in her case there exists, and has existed for some time, chronic endometritis with lateral displacement. She claims to have no sexual appetite, but of that I have very serious doubts.

Case IV.—Mr.——, a widower, using morphine, not less than eight grains per day, married.

Within eighteen months after his marriage, his wife, a delicate lady, gave birth to a fine boy. This child has developed rapidly, and to all appearance has suffered not at all from the vice of its father. Before the child was more than a year old, the father died from the morphine habit, being reduced almost to a skeleton.

Case V.—Mrs. ——, used morphine for years, and at the time of the birth of her third child was consuming eight to ten grains a day. In 1884 she gave birth to a well nourished and apparently perfectly developed boy, weight seven or eight pounds. Within twenty-four hours the child began to grow restless and nervous. In the next twenty-four hours the nervousness increased, and the child frequently became cyanotic. On the third day, all the symptoms grew worse, the cyanotic condition continuing almost all the time. On the fourth day the child died. Not knowing anything about the mother's habits, opiates were very sparingly administered to the child, and its death was pronounced due to non-closure of the foramen ovale, which I think did exist in the case.

In the latter part of 1880, another child was born, the mother still using morphine in an increased quantity.

The history of the first child was repeated in the second. It died on the fourth or fifth day thoroughly cyanosed.

In 1889, the mother still using morphine, another child was born, which died in the same way, on the fifth or sixth day. In 1892, the mother, still using morphine, consuming two drams per week, about seventeen grains per day, was confined. Her labor was natural, and of short duration, everything passing off nicely. The child was finely developed, well nourished, weighing nine pounds. For the first twenty-four hours everything progressed favorably. The mother, however, was allowed to get too much from under the influence of morphine and became nervous, and complained of a general malaise, with some pain in the right lung.

The husband was cautioned to keep up the usual quantity of morphine to protect against shock and after-pains. In spite of the directions given, etc., morphine was practically discontinued and at the extirpation of forty-two hours after the termination of labor, a severe convulsion came on. The patient was rapidly morphinized, but before a sufficient quantity had been administered to saturate the system, a second convulsion came on, not so severe as the first. Pilocarpin was then administered, and no further convulsions resulted for twenty-four hours, when, the morphia, having been neglected, a third slight convulsion developed. From that time on,

two grains of morphia were given hypodermically every four hours regularly. The patient after improving rapidly until the seventh day, suddenly died at the end of the eighth day with congestion of the lungs.

The infant on the third day became cyanotic, and extremely nervous and fretful. Tr. Opii Camp. had been begun on the second day in two drop doses every two to four hours. The doses were increased to five drops, till, with aid of the free use of whiskey, the child was quieted. On the fifth day the cyanosis diminished, but the child appeared to be in a moribund condition. Paregoric and whiskey were again freely used, fifteen drops of the former being given within six hours, and during the night of that day, twenty drops were administered before midnight. The quantity of the opiate and the whiskey was gradually diminished, the former being dropped by the twelfth day. The child is still living, just one month old, but has an aged, pinched look. Its digestion has been poor.

In this case the morphia habit had continued for at least ten years.

If the sexual appetite was abolished, of which fact I know nothing, yet the power of fecundation had not been disturbed, nor had menstruation been any more irregular in her case than in other child-bearing women.

Case VI.—A healthy married woman menstruated scantily all her life. Family history excellent. Suffered from sick-headaches. After marriage began using morphine for relief from the severe pain. Her first child was born in 1885 two years or more after her marriage, before she began to use morphine regularly. He is a stout, healthy, vigorous, well-developed child, nine years of age. Between the birth of this child and her next pregnancy, she became a morphine user. In 1887 she gave birth to a puny, delicate, cyanotic child, emaciated at birth, and troubled with diarrhœa. At that time I did not suspect the morphine habit. The simple remedies usually given to babies did not control its diarrhœa. Paregoric had little or no effect even in five or six drop doses repeated every two or three hours at the age of three days. I began using Dover's powder, giving from two to three grains at a dose every two to four hours.

*The child has since died aged about five months.

The child became more quiet, its bowels were controlled, and at the end of the first month of its life, the use of opiates was dispensed with.

That child, now in its fifth year, is not larger than it should be at three, has a puny, sickly look, and although never really sick, is never well.

In 1887 the mother was using morphine, not less than ℥i per week.

She became pregnant and was delivered of a fine, well-developed child.

In twenty-four hours it became nervous, fretful, cyanotic and died perfectly cyanosed on the third day. The mother had a good "getting up" and in 1891 was delivered of another child in fair condition. At the time of the birth of this child, and in fact all through the pregnancy, she used at least eight or ten grains of morphine per day. The history of this fourth child is a repetition of that of the third. On the fourth day it was buried. It died cyanosed.

In this case the mother denied all sexual appetite. Her menstruation was as regular after she began the use of morphine as it was before she began it, never having been very free, lasting at most one or two days.

Opiates were administered freely to the last child, but to no avail.

Case VII—A mother, a confirmed morphine eater, using from eight to ten grains per day, has two living children, one deaf and dumb, and the other a blind idiot, she miscarried of a third child at six months. She suffers from chronic uterine disease.

Case VIII.—A mother who was a confirmed "opium eater" gave birth to two boys and a large family of girls. One of the boys died at the age of 22 to 25 of chronic alcoholism. The other is notoriously of no-account.

I might cite more cases of a similar character, but the ones already given will answer my purpose to impress the point I desire to make.

First, in reference to the children of morphine users. My experience thoroughly satisfies me that when the *mother* uses morphine habitually, the child is born with some defect of the heart—a congenital heart disease: either there is non-closure of the ductus arteriosus, the foramen ovale, or the pulmonary orifice, and in some cases, the inter-ventricular septum is defici-

ent. I do not pretend to assert that the use of morphine is the sole cause of these defects, but that when morphine is used to excess, in the large majority of cases the deficiencies do exist.

Generally, the first intimation that you have of any defect in the development of the child, is that after becoming restless and fretful, a cyanotic condition supervenes. The nurse calls your attention to the fact that the child is "blue." The child may have been, and frequently is born, as shown in the few histories given, apparently in fine condition. It rests well for the first twelve or twenty-four hours. It is reported to you as an unusually "good child," sleeps nearly all the time, does not want to be nursed, etc. On the second day, however, you are apt to be informed that the child is fretful, restless, colicy, and then later on, that day or the next, that the child becomes blue at times. As a rule this condition grows worse unless you suspect, or know, the cause of the trouble and begin the free use of opiates and stimulants. This condition is easily understood, and the need of the treatment suggested, comprehended, if you bear in mind the fact that the child is born an opium user.

Its blood is, so to express it, saturated with the drug. The mother has lived on it, and the fœtus has developed under all of its baneful influences.

To finish up and perfect the heart is the last work to be done, and the closure of the foramen ovale and other portions of the heart mentioned being left to be finished after the child has begun its separate existence, the supply of opiates being suddenly cut off, the equilibrium of the nervous system is destroyed and nature's finishing work suspended.

The closure of the foramen ovale could not be permitted as long as the child existed in utero, and now the work cannot be carried on, with the nervous system crying out for opium: hence, the restlessness which induces irregularities of circulation, blueness, etc.

If this cry of the nervous system can be quieted and the child nourished, nature may be, and sometimes is able to complete her work. This is shown in the case of the first child of Case No. VI. and the last one of No. V.

Both these children were promptly saturated with opium and whiskey, both of which were gradually withdrawn, the child being all the while well nourished; with the result in both cases of a cure so far as the congenital heart disease is concerned.

There can be no possible trouble in understanding the rationale of cyanosis in children born of morphine habitues, if they have ever once witnessed the horrible agony of a morphine slave, when it is suddenly taken from him. It has been aptly described as "the tortures of the damned."

In every case of cyanosis in the newborn infant, the first step must be then to ascertain, if possible, the habits of the mother in regards to the use of opiates. This will be found no easy task. The confirmed user of the drug will deny the fact as promptly as the question is asked, but the inquiry must not stop with the mother alone.

The husband and nurse must be interrogated, and still if no light is thrown upon the question, if there is the least reason to suspect the habit, opiates in tentative doses, either in the form of Tr. Opii. Camp. or Pulv. Ipecac Comp. must be cautiously given. If the infant is found to tolerate them well, your case can be taken as almost proven.

Under the supervision of the physician, the opium and the whiskey, after you have quieted the child fully, must be slowly and carefully withdrawn, being sure not to reduce the dose too rapidly.

It is still an undecided question in my own mind, however, whether, considering the good of the child alone, it were not better to allow it to die.

Morphine becomes "me judice" a disease transmissible by heredity almost to as great a degree, and in the same way that tuberculosis and such like diseases are handed down. Not that the disease itself is transmitted, but a condition, a soil, a nidus or whatever you may be pleased to call it, is handed down to the child, and some fortuitous circumstance develops to disease.

The offspring of the victim to the morphine habit has a condition of the nervous system that when once subjected to some exciting cause develops the habit rapidly.

Dr. T. D. Crothers, of Hartford, Conn., in The Medical and Surgical Reporter of March 5th, 1892, in an excellent article, shows that the morphine habit is frequently transmitted to the offspring of the users of the drug in the form of a neurotic dia-

thesis; rather that the children have inherited from their parents some condition of the brain which predisposes to the developement of nervous diseases and that in some cases there is a special inherited tendency to use opium.

He cites as follows:

To a mother who was a morphine user, and a hypochondriac father, two children were born. Both were healthy and highly educated. Both became opium users: one at the age of 30; the other at 24. Again—

To a father and mother, both opium users, three children were born.

The parents died. The children knew nothing of their addiction to opium.

All of them became morphine users before they reached the age of fifty years.

Third. Both parents were neurotic and probably opium users.

They died leaving an excessively nervous, irritable infant. Morphine was accidentally used to quiet it, and from that time forward it would become delirious without a daily dose of morphine.

It died at five years, a confirmed morphine user.

Again—Five children of unknown parentage became confirmed opium eaters.

Many more such cases might be cited. He concludes this part of his article as follows:

"The relief which this drug brings on all occasions and its impulsive use are unmistakable indications of a distinct opium diathesis."

A complex diathesis sometimes exists in many opium cases. Alcoholics sometimes use opium irregularly, and transmit that diathesis to their offspring and vice versa.

Morphinism and alcoholism are frequently interchangeable, the slaves of the one turning at times to the other for a rest.

Whilst this opium diathesis is present in a majority of cases, yet it must not be forgotten that in a small minority of cases, a sensitiveness to the effects of opium which is remarkable exists—a very small dose producing an overwhelming effect at times, and in other cases producing such a degree of emesis and prostration as to alarm the whole family.

Whenever then an opiate, rapidly and pleasantly, relieves pain with nothing except a pleasing sense of cure, then an opium diathesis must be suspected and the drug administered, if at all, with the greatest circumspection. One dose demands another, and unless the physician knows exactly where to stop, and when, a morphine habit is rapidly developed.

Especially is this true where the opiate is administered hypodermically.

The number of victims to the morphine habit has rapidly increased since the introduction of the hypodermic syringe. The effect is rapid, pleasant and seductive.

I would not condemn the hypodermic syringe. A physician who does his whole duty cannot do without one, that is always ready for an emergency.

It is not the syringe but the unthoughted use of it that is to be condemned.

The quantity of opium used in the United States has largely and rapidly increased. In 1854 the amount imported was about 72,000 pounds, in 1880, 372,000 pounds, in 1890, about a half million pounds. The legitimate demands of medicine would call for an increase in quantity commensurate with the increase in population, but see the contrast.

The difference between the legitimate demands of medicine, and the actual amount used shows how much, approximately, is consumed by opium eaters.

This fact no doubt largely accounts for the rapid increase in the number of cases of insanity, idiocy and imbecility in the present generation.

The custom is to charge the increase to the American method of living, with its rush, push and scramble to amass wealth, but the rapid increase in the per cent. cannot be explained in that way, but the father and mother, or one, or the other, being addicted to the use of opium to excess, their sins are visited upon the children of the third and fourth generations, and we see the results.

This paper is written for the purpose of calling the attention of the profession to the evil, and to place each one as a sentinel upon the wall to watch and record the effects of this blight upon modern civilization.

I may have discovered nothing new, I do not claim that I have, but I propose to put upon record my own experienee with a limited number of opium-takers.

It was the celebrated Dr. Bowling, I believe, who said that if we all read more, we would find that we had discovered fewer new things.

I do not find the literature as abundant upon this subject as it ought to be, hence this mite.

COMMINUTED FRACTURE OF THE SHAFT OF THE FEMUR, WITH REPORT OF A CASE.*

By F. H. LAY, M. D.,
CONSULTING SURGEON TO ST. LUKE'S HOSPITAL, DENVER.

Comminuted fracture of the shaft of the femur presents more than ordinary difficulty to be overcome, since from the great injury to the bone and surrounding tissues, a perfect reduction of the fracture and fixation of the fragments become almost impossible; and since the liability of non-union in feeble subjects is always an unpleasant possibility.

Many of the gentlemen present remember no doubt the prolonged discussion about ten years ago between the late lamented Dr. Frank H. Hamilton and Dr. L. A. Sayre, the question in dispute being whether a fractured femur properly treated should result in a bone of normal length; Dr. Hamilton contending that under the best of care, a slight shortening was in the majority of cases inevitable, there being a molecular absorption of bony tissue at the fractured surfaces.

The committee appointed by the American Surgical Association, in 1890, to report what should be deemed a satisfactory result of treatment of fracture of the shaft of the femur, submitted the following conclusions which were adopted by the Association: "A satisfactory result has been obtained in the treatment of the fracture of the shaft of the femur; (1) when firm bony union exists; (2) when the long axis of the lower fragment is either directly continuous with that of the upper fragment, or the axes are on parallel lines, thus preventing angular deformity; (3) when the anterior surface of the lower fragment maintains nearly its normal relation to the plane of the upper fragment, thus preventing undue deviation of the foot from the normal position; (4) when the length of the limb is either exactly equal to that of its fellow, or the degree of shortening falls within the limits found to exist in 90 per cent. of healthy limbs, namely, from one-eighth of an inch to one inch; (5) when lameness if present, is not due to more than one inch of shortening; (6) when the conditions attending the treatment prevent other results than those obtained."

In view of the above, a surgeon should not be discouraged to find his femur fractures recover with slight shortening.

However, our aim should always be *perfection,* and this can only be accomplished by using the best methods in our treatment

Last March a case of comminuted fracture of the femur was placed in my care. I found two oblique fractures; one through the upper third just below the trochanter major, the other through the center of the middle third; the limb being shortened four inches, and the central fragment being very movable.

Having tried various methods in previous cases, and being best pleased with the Hodgen splint, suggested to me by Dr. L. E. Lemen of this city, I concluded to use the Hodgen for this fracture, and therefore dressed it accordingly; the limb being supported, suspended and strongly *extended* thereby, and also the fragments being further held immovably in position by four padded short splints which aided in preserving the normal antero-posterior curvature of the bone.

Passive motion of the knee and ankle joints was made occasionally after the fourth week, but the splints were worn seven weeks, at the end of which time union in both fractures were firm. The long axis of the lower fragment is in direct line with that of the upper, and by most careful and oft repeated measurements I find no shortening whatever.

This certainly is a test case and proves conclusively to my mind the value of the Hodgen splint; also that the ground assumed by my teacher, Dr. Sayre, that a fractured femur properly treated should be of the same length after as before the injury, is correct.

*Read before the Colorado State Medical Society, June 1892.

HOW TO REMOVE NITRATE OF SILVER STAINS FROM THE FINGERS.

A correspondent of the *Scientific American* gives the following harmless process:

First paint the blackened parts with tincture of iodine, let remain until the black becomes white. The skin will then be red, but by applying ammonia the iodine will be bleached, leaving white instead of black stains of nitrate of silver.

RESECTION OF THE INTESTINE WITH CIRCULAR ENTERORRHAPHY.*

By P. M. JEWELL, M. D.,
OSSIAN, IOWA.

On Nov. 28th, 1889, in consultation with Dr. Lewis, of Ridgway, Iowa, I saw Rollin B., aged 9 years and 7 months. He had been ill for about two months with his present trouble, the symptoms of which now considered of severe spasmodic pain in the abdomen referred to the left side, tympany, frequent attacks of vomiting, protrusion and gradually increasing emaciation.

There was a history of an attack of peritonitis, some 4 or 5 months previously which had run an acute course, the boy being confined to the bed for about two weeks. He had apparently fully recovered from this attack with the exception of some irregularity of the bowels accompanied with colicky pains, which was usually relieved spontaneously or by domestic remedies and followed by a diarrhœa lasting some days. He had been gradually failing until now he was reduced to a living skeleton and was so weak that he was unable to assume the sitting position in bed without complaining of vertigo. When not suffering from the paroxysms of pain, he was comfortable, cheerful and inclined to be playful. Faculties of mind unimpaired. His temperature was normal at the time of my visit, pulse rapid, soft and weak, extremities cold, breathing rapid and superficial from pressure on the diaphragm of the distended abdominal viscera and the extreme anæmia present.

Taking into consideration the history, symptoms and condition of the patient, my diagnosis of the case was that he was suffering from a gradually increasing stenosis of the bowel, produced, no doubt, by bands of adhesions resulting from former attacks of acute peritonitis. Advised operation as the only hope of relieving the occlusion and saving the life of the boy.

Dr. Kessel, of Cresco, subsequently saw the patient and without a previous knowledge of my opinion came to the same conclusion as regards diagnosis, prognosis and treatment. As throwing some light upon the development and history of the case, I append some notes kindly furnished me by Dr. Lewis, as follows:

October 5th, 1892. Was called to see Rollin B., aged 9 years. Found temp. 102.5°, pulse 120. Severe pain in left hypochondriac region. Bowels constipated, vomiting, skin hot and dry.

October 6th, 8 A. M. temp. 104° F., pulse 128. Other symptoms and conditions unchanged. 4 P. M. Bowels moved freely; temp. 103° F., pulse 120. Pain less severe.

October 7. Rested well through night. Temp. 102.5° F., pulse 120. Vomiting once; no pain.

Oct. 8. Temp. 102., P. 120. No pain.

Oct. 9. Temp. 100°. P. 100. No pain.

Continued to improve until November 9th, when he again began vomiting and complained of great pain in the left hypochondriac region when peristalsis occurred. Ate very little. Opiate administered. Patient continued vomiting and complaining of severe pain in hypochondrium with a temperature of about 100°., and pulse of 110 until the 29 of November. He then rested well, and ate some in the morning. At night had an attack of urticaria. Laxative administered.

Nov. 30th. Urticaria disappeared.

Dec. 1st. Vomited several times. Fæcal odor. Temp. 98°. Pulse 102. Patient emaciated very much. Very weak.

Dec. 2nd. Temp. normal, and pulse 94. Took beef tea. Rested well all day. Restless all night.

Dec. 3rd. Temp. 98,° and pulse 98. Severe pain in left hypochondrium.

Dec. 4th. Temp. 98°, and pulse 98. Pain severe. Hypodermic of morph. sulph. gr., ¼, and atropia sulph. 1-150. Pain relieved. Patient continued in about this condition, vomiting a great deal and pain all the time unless under the influence of an opiate up to Dec. 10th, on which date he was operated upon."

The parents, having thoroughly satisfied themselves of the fatality of further dependence upon medical aid finally consented to an operation. During the succeeding interval the necessary antiseptic arrangements and details were overseen and carried into execution by Dr. Lewis. so that by Dec. 10th, everything required

*Read before Iowa State Medical Society, May, 1892.

for the performance of an aseptic operation was perfected.

At about 10.30 A. M. the patient was placed upon a table and ether administered by Dr. Lewis. Dr. Kessell ably and very efficiently assisted me in the operation.

An incision was made in the median line below the naval and subsequently enlarged some distance above. My dissection was inadvertently continued directly through the omentum before I knew I had reached the peritoneal cavity, for the adhesions at this point were so firm and intimate between the attenuated folds of the omentum and the parietal peritoneum that the line of separation was undistinguishable in the poor light we had to work in. (The day was very unpropitious, being cloudy, rainy and consequently very dark.) When found the source of obstruction was seen to be several loops of the ileum and the lower border of the omentum all firmly matted together and intimately attached to the fundus of the urinary bladder by inflammatory adhesions.

In my efforts to separate these attachments and adhesions, which I am sure were made with great care and deliberation, I had the misfortune of making several longitudinal tears into the intestine, varying in length from ½ to 1½ inches, and had torn the bowel entirely in two on the distal side of the stricture and its attachments. It was simply an absolute impossibility to distinguish a line of separation between these agglutinated tissues, and the dissection was continued in the direction most likely to keep clear of the bowel walls and in the cicatricial tissues, with the result above stated. At last, however, I succeeded in peeling the agglutinated mass off the fundus of the bladder complete, without opening into this viscus. The entire affected mass was now brought outside the abdominal cavity, and placed on aseptic towels (towels which had been wrung out of hot boiling water) and the general cavity protected by other similar towels placed in and over the incision and changed occasionally to maintain the proper degree of warmth.

The work of separation of the adhesions was now completed, and wherever an opening through the bowel wall had been made, a coarse ligature of aseptic silk was thrown around the tube on each side of the opening about three inches distant and tied close enough to prevent any escape of fæcal contents. The bowels were not much distended with fecal matter or gas.

In all suturing of the intestine the finest black silk and ordinary fine, straight milliner's sewing needles were used. The thread and needles had been treated to a bath of boiling water and acid (carbolic) in the proportion of about 1:25 had been subsequently added. From this solution they were taken as required for use. Closure, which fortunately had occurred directly opposite the mesenteric attachments of the longitudinal rents, was now proceeded with. Interrupted Czerny sutures including the mucous and muscular coats of the bowel were introduced every ¼ to ⅜ inch and tied. Over these the serous coats were brought together by an interrupted or by a continuous, right-angle Lembert suture, introduced from ⅛ to $\frac{3}{16}$ of an inch apart. Wherever the peritoneal coat has been torn off, the right-angle, continuous Lembert suture was also made use of, to serve as a support to the denuded bowel and to prevent subsequent adhesions. The intestine at the point of the occlusion next received attention.

At this point, about ¾ of an inch of the bowel was constricted to a narrow tube, which felt under the finger like a firm cord, and had a passage way through it about the size of a rye-straw, or the point of an ordinary pencil. Near this constriction, but far enough away to secure a section of full size, the bowel was cut across by a single stroke of straight scissors and at right angles to its long diameter. The edge of the ragged (distal) end was trimmed off smoothly and far enough away to secure a section of full calibre. A triangular piece of the mesentery was also removed, the base fully one inch in length corresponding to the section of gut exsected, and the apex pointing toward the spinal attachment of the mesentery.

After the hæmorrhage had been controlled by a few fine silk ligatures the parts were thoroughly cleansed in boiled water, and the flaps of mesentery brought together by a number of interrupted Lembert sutures. When the intestines was reached, the mesenteric attachment of each end was carefully brought into apposition, the work of uniting the two imperfect cylinders began. In doing this a Czerny suture was introduced at the mesenteric junction and securely tied. *Here is*

the vulnerable point in circular enterorrhaphy *in the repair of bowel resections*, leakage being very apt to occur, from the very evident fact that the Czerny here cannot be reinforced and strengthened by a Lembert suture behind it. The first Czerny suture in the repair of the bowel resection was made to enter and pass through and include the mucous and muscular coats about three or four sixteenths of an inch from its free border and directly over the center of the mesenteric attachment, passed across the gap to the opposite side, entered directly over the mesenteric attachment, underneath the mucous and muscular layers and brought out on the mucous surface about three-or four-sixteenths of an inch from the free border. This was now carefully tied, the knot, of course, falling within the lumen of the gut. Two more Czerny sutures were now introduced and tied, one on each side and about one-fourth of an inch from the first. These were immediately reinforced by the introduction of a Lembert on each side of the mesentery, near the junction of this tissue with the intestines. The Lembert suture is usually described as including the serous coat alone, but in using this variety of suture, I aim to and did include a bundle of the circular muscular fibres of the gut in the grasp of each thread, and think it much better and stronger than including the serous coat alone.

Wyeth describes what he calls an "intermediate suture," which is made to enter the serous coat about $\frac{3}{16}$ of an inch from its free border, passed through this and the muscular coats and out at the free border across the gap and made to include both muscular and serous coats on the opposite side in the same way. He recommends that this suture be used in conjunction with the Lembert and alternately therewith.

I cannot see any advantage in this over the Lembert suture when this is made to include the peritoneal and muscular layers. in fact, I think the latter has advantage over the former. If each Lembert suture has within its grasp a bundle of muscular fibres, its hold upon the opposed structures must be more firm and secure, than when serous fibres alone are included within its grasp. When the gap is thus closed. there will be about $\frac{6}{16}$ of an inch reinforced on each side bg a ring of muscular fibres behind it, and held in place by the same set of sutures that maintain the surface in contact. This will continue to do, so long as the muscular fibres in the bite of the sutures maintain their integrity, and that they are capable of doing so and offering greater resistance to strain and tension than the serous coat there can be no reasonable doubt.

The Czerny sutures were introduced about $\frac{1}{4}$ to $\frac{3}{8}$ of an inch apart and the row kept one or two stitches ahead of the row of Lembert. The object of this was to invert the naturally everted ends of the bisected intestine with the Czerny and to clinch the inversion and coapt the serous surfaces at the same time by the Lembert suture. Thus. one suture is the natural complement of the other. A slight difference in size seems to exist between the ends of the afferent and efferent tubes, and an allowance had to be made in suturing that this difference be distributed evenly over the line of coaptation and not concentrated all in one place. This necessitated introducing the sutures a little farther in one end than the other. When the sutures were all in the temporary constricting ligatures were removed. No leakage occurred. The intestines were now carefully washed with boiled water and returned to the abdominal cavity. The ragged omentum was ligated in sections, the distal extremity amputated with scissors, washed with boiled water and returned to the abdominal cavity.

After all discoverable adhesions had been broken down, the abdominal cavity was several times thoroughly flushed with hot boiled water, poured directly into it from a pitcher until the flushings returned unstained, then sponged out and dried carefully. All hæmorrhage having ceased the omentum was spread out over the intestines in as natural a manner as possible, and the wound in the abdominal parieties brought together by interrupted sutures of strong silk thread, no drainage tube being introduced.

A few intermediate sutures were introduced to secure nice coaptation of the superficial structures and the dressings then applied. These consisted of pulv. iodoform along the line of the incision overlaid by several thicknesses of sublimated gauze, then adhesive straps laid at right angles to the incision then a large pad of salicylated cotton, then one of ab-

sorbent cotton, and over all and holding the others snugly in place a few turns of a wide flannel bandage.

The etherization had been discontinued towards the latter end of the operation, until as the last sutures were being tied and the dressings applied, the consciousness of the patient was quite restored. This was a wise provision as by this time the shock was profound, the operation having lasted fully two and a half hours. The patient was now quickly transferred to a warm bed and hot blankets and dry heat generally applied.

Morphia and atropia were administered hypodermically to assist in the restoration of the vital powers and to control pain and secure quiet. The doses were repeated through the night as indicated.

The notes of the case for the next four days taken at the bedside and furnished me by Dr. Lewis are quite interesting. From them I quote as follows:

Dec. 11, 7 A. M. Temp. 104° F., Pulse 140. Quinia sulph. and opium per rectum. Quinia also by mouth; 4 P. M. Temp. 104° F., pulse 140; 10 P. M. Temp. 103.5° F., P. 136.

Dec. 12, 8 A. M., Temp. 102.5° F., P. 130; 4 P.M., Temp. 102° F., P. 130; 10 P. M., Temp. 101.5° F., P. 130. (Beef peptonoids per rectum).

Dec. 13, 8 A. M., Temp. 100° F., P. 120; 4 P. M., Temp. 100° F., P. 120; 10 P. M., Temp. 95° F., P. 120.

Dec. 14, all day Temp. 99° F., P. 120.

Dec. 15, all day Temp. 98° F., P. 120. (Dressed wound, doing nicely).

Dec. 16, 17 and 18, Temp. normal, P. 110 to 100; 18th, dressed wound. Removed every second stitch. Patient ate an orange.

Dec. 19, 20 and 21, Temp. normal. Bowels moved spontaneously without pain on 21st, 10 days after operation.

Dec. 22. Dressed wound. Removed all stitches. Wound healed.

Dec. 23, 24, 25 and 26. Nothing to note.

Dec. 27. Removed all dressings. Reapplied adhesive straps.

Dec. 28. Temp. normal; P. 90. Patient sat up and continued to improve until recovery was complete, and up to date, Dec. 1891, when notes had been received, boy had never had a pain or been indisposed in any way.

After the currents of life had been reestablished in their original channels and the shock of the operation had passed away the subsequent history of this patient is uninteresting, but considering his extreme emaciation and the low ebb of his vitality at the time of the operation; the very complicated series of surgical measures to which he was subjected and the length of time necessarily consumed therein, the final result is interesting to every man engaged in the practice of medicine and surgery.

A combination of such extensive and serious lesions as were present in this case is not likely to be met with in a very large number of cases. It has been my fortune to see quite a number of similar cases and to have made *post mortems* upon many of them, and I have never seen any in which an appropriate operation would have been less likely to succeed than in this.

The method here adopted, the materials used and the technique practiced, are not new or extremely difficult. They are the common heritage of the profession. They lie at every man's door, all he has to do is to put forth his hand and appropriate them.

I am not prepared to say how many fatal cases of intestinal obstruction occur annually, even in the State of Iowa, but judging from my own observation and experience, there are certainly not a few, but this I can confidently assert, the majority of these might be saved by a timely resort to surgical interference.

Resection of the intestine with invagination and closure of the resected ends by a double row of Lembert sutures and the establishment of a mucous fistula between the two by Senn's approximation, decalcified bone plates, may be possible, from the fact that these appliances are not ordinarily a part of the operator's surgical armamentarium and they require time and trouble to manufacture or to secure by purchase.

The same objections apply to Abbe's catgut approximation rings, Brokaw's segmented rubber rings, Robinson's rawhide plates, Mata's or Davis' solid catgut rings or mats, Baldy and Ashton's solid rubber rings, and nearly all appliances of this character with which I am acquainted with the possible exception of Dawbarn's vegetable approximation plates made from sections of raw potatoes, (*vide Med. Rec.*

June 27, 1891). These, however, require further trial to prove their efficiency for the uses to which they are put. I do not know of their being used in actual practice upon the living human subject. They would seem to lack the requisites of strength and firmness so necessary in an appliance of this kind.

So, in the majority of cases, in the absence of some of the regulation time-tried approximation plates or rings, unless we are willing to assume the risks of the vegetable (potatoes) approximation plates of Dawbarn, we have to fall back upon resection and repair of the gut by circular enterorrhaphy, or lateral anastomosis by suture without anastomotic appliances. Robt. H. Weir reports (*vide Med. Record*, April 19th, 1892) one successful case by this method, where the ileum a short distance from its junction, was united to the sigmoid flexure for relief of a neoplastic intestinal obstruction, located in the transverse colon, thus throwing out of the bowels circuit the entire colonic tract. I am free to say that this method seems to have the advantage of simplicity of detail over that practiced by myself in the cases above reported.

Of this, however, I am fully convinced, viz., the general practitioner, or at least such of them as essay to do the surgical work of general practice as it presents, should be prepared to meet successfully the indications which arise in intestinal obstruction from injury or disease in man, by acquainting himself thoroughly with the improved technique of intestinal anastomosis, with or without the aid of some of the approximation rings or plates now in use, or that of resection and repair of the gut by circular enterorrhaphy.

PIGMENTATION OF THE SKIN CAUSED BY CHRYSAROBIN.

It is known that when chrysarobin ointment is used in the treatment of psoriasis the affected parts of the skin appear white, whilst the surrounding healthy skin appears yellowish-red. Campana examined portions of the skin microscopically and found that the pigmentation in the surrounding skin was caused by the deposit of numerous blackish-yellow particles of chrysarobin within and between the epithelial cells in the basic layer of the horny epidermis.

Society Reports.

MEDICO-CHIRURGICAL SOCIETY, OF LOUISVILLE.

Stated Meeting July 22nd, 1892.

The President, Dr. F. C. Simpson, in the Chair.

Dr. D. T. Smith: I would like to continue report of a few cases: First, the two children I exhibited at the last meeting of this Society suffering from a peculiar nerve trouble—their condition remains about the same.

Second, you will remember I brought before the Society about six months ago, a child with a tumor on the head. This afterward developed into what was supposed to be sarcoma, growing very rapidly. The patient was taken to the Children's Hospital and Dr. Cecil removed the growth. It had the appearance of sarcoma and was probably congenital. A few days after the operation the child died; no microscopical examination was ever made of the growth.

The third case is one that I presented to the Society about eighteen months ago, the patient having many symptoms of Renaud's disease, or symmetrical gangrene, but not a typical case by any means. The case has been progressing, and the patient is now suffering a good deal of pain, complains of cold and numb feelings about the spine, etc. She is very apprehensive that it will run to a fatal termination. She complains of pain especially between the shoulders, and a point about the lower one-third of the dorsal vertebræ is decidedly tender on pressure. The appetite is still fairly good, but the condition of weakness, pain, depression, coldness of the limbs, etc. mark the progress of the disease. Since she left me, she has been treated by a great many physicians and has undergone various kinds of treatment, none of which have been of any particular benefit. Now, she returns to my care, and I must confess that I know of no remedy that would be of advantage. I proposed electricity in this case with but little belief that it would do any good. I believe it is a degeneration of nerve cells in the brain and cord, just exactly what kind I am unable to say. No medication

she has used has done any perceptible good, one kind any more than another.

CONGENITAL CATARACT.

Dr. J. M. Ray: About a year ago I reported to this Society five cases of congenital cataract that I operated on in one family. These children were brought here to the blind school and originally fell into my hands. I operated upon all five by the needle operation. The oldest one, it seemed, had never been able to see at all. I did a pretty thorough operation on her and in a week afterward there was quite a rent through the lense, through which the light reached the retina, or partially so. I held my watch in front of her, and she would say it was very bright, although she did not know what it was. The other children had a little sight. The oldest child was about seventeen, youngest about seven years of age.

It is very curious that five children in the same family should be similarly affected. I noticed not long ago in some foreign medical journal a report in which the family history could be traced back through several generations; that is a tendency in the family to the development of cataract in several generations. It is impossible to trace this family history back that far, but I find that the father has cataract, completely blind in one eye and partially so in the other. He has a brother who has cataract, and this brother has a son who is also affected, and this is as far as I can trace it. It seems quite strange that they all were born with cataract.

Dr. S. G. Dabney: Dr. Ray's report is very interesting indeed; five cases of congenital cataract in the same family. It is remarkable to what an extent heredity influences certain diseases of the eye. A few years ago I reported to the Louisville Medical Society cases of retinitic pigmentosa occurring in four successive generations of the same family.

In regard to cataract—I had rather an odd experience recently: I saw a child about eight years old whose eye had been operated upon in the same manner as described by Dr. Ray. The mother had never been satisfied and thought the child had not received anything like the benefit from the operation that she ought; really it was because she had neglected to have the proper glass adjusted. I fitted it with a glass and the patient is now able to see very well. I operated upon the other eye for similar trouble, and have just about finished it now, with perfect result.

HEREDITABILITY OF RETINITIC PIGMENTOSA.

Dr. J. M. Ray: Concerning the hereditability of the disease—retinitic pigmentosa—it has been thought to be the result of consanguineous marriages, more than anything else. I saw a woman yesterday having acute glaucoma in one eye; I operated on her sister six months ago for the same trouble; the sister came to me at the college dispensary with absolute glaucoma having occurred primarily some years before. She had repeated attacks which led to complete blindness. At the time I saw her the eye was sightless and I advised her to have it removed as it was very painful. I prescribed eserine which gave her almost immediate relief. I was called to see her sister in consultation on Tuesday evening; found her suffering with acute glaucoma and advised an immediate operation. This was refused, and she said she wanted some of the drops like I gave her sister. I told her I thought she was losing valuable time; that an operation was demanded and that immediately. I gave her some of the drops, but they did not give the same relief as in the former case.

GLAUCOMA.

Dr. S. G. Dabney: An old gentleman came to me last fall from another city; he was led into my office by a boy about fifteen years old, and I took it for granted, of course, that the old fellow who was being led in was the patient. He said he was uneasy about the boy's eyes. He then gave me this history: He said he, himself, lost his sight about thirty years ago with glaucoma: that his oldest son when about eighteen years of age had lost his sight with glaucoma, and he believed the boy he had brought to me also had the disease. And he evidently did have a typical case. I gave him an unfavorable prognosis as the case was already chronic and of long standing, but advised that an operation be done at once. The old gentleman said he had had the operation of iridectomy performed on himself as well as on his oldest son, but both of them had lost the sight of both eyes. Nevertheless

I advised this operation as I thought it was the only chance. I think his intention was to see other oculists; do not know whether he did or not.

It was a remarkable instance of glaucoma occurring in three members of the family, also occurring in the two cases at such an early period in life.

Dr. D. T. Smith: In the matter of the influence of consanguineous marriages: This is a subject that I have taken considerable pains to investigate. At one time you know it was regarded as almost criminal to contract consanguineous marriages. There is no doubt that this feeling to a certain extent should exist, in order to prevent improper marriages. However, for the last several years, the fever has died out and I believe that justice is being done by thoughtful men on the subject. I think now it is universally accepted by men who are capable of deciding in matters of this kind, that marriages of blood relations, unless there are physiological reasons to the contrary, are entirely safe. We all know that great perfection in the development of extra qualities has been attained by in-and-in-breeding among the lower animals.

SARCOMA OF MAMMÆ.

Dr. T. H. Stucky: I simply want to continue report of a case: You will remember at a meeting of this Society several weeks ago, I read a paper on subject of sarcoma of the mammæ, in a girl thirteen years of age. One breast was removed on account of sarcomatous growth. The other breast is now becoming involved and will soon have to be removed.

CASE OF GALL STONE AND SUBSEQUENT MORPHINE POISONING FROM OVERDOSING.

Dr. D. T. Smith: A gentleman about thirty years of age came to my office stating that his health had been fairly good, with the exception that for a week he had had some pain in the epigastric region which lasted a short time at first, and would then return with more severity. He had a very unfavorable look about his face, nutrition seemed to be very much impaired, and I felt that the case was rather more serious than he seemed to anticipate. I prescribed an anodyne for him as he was suffering some pain; after a short time I was called to him and finding him in severe pain, prescribed four grains of morphine in a mixture of two ounces, with instructions to take a teaspoonful every half hour until he was relieved. This was about ten o'clock in the morning. About two or three o'clock in the afternoon I was again called to see the patient, the pain at this time was intense, and he was evidently passing gall stones. I gave him two doses of the mixture of morphine, and told him to remain in bed until he got relief. About seven o'clock that evening he became quiet; he had taken then about three grains of mophine—from ten o'clock in the morning until seven at night. He had also taken a little turpentine and ether, I believe one dose of each. He passed through the night very comfortably, using hot cloths the over seat of the pain. The next morning when I saw him he was breathing only about two and one-half or three to the minute, pupils were contracted, just as we would expect to find in morphine poisoning. This stupor came on only late at night. I used artificial breathing and after a short time left him; did not think the conditions justified any very great apprehension. About eleven o'clock that morning I saw him again and his condition was little better. About nine o'clock that night Dr. Anderson saw him with me and he was still in a partial stupor, slow breathing, delirium and a little fever, temperature 101.1-2° F. He again began to complain of pain in the region of the liver. The second morning the stupor was still present though not so marked. I knew that the effects of the morphine had entirely passed off, and believed it was some products of the liver that was producing the poisonous effects. After a week he was able to sit up and is now slowly recovering.

It was rather remarkable that this patient should have had symptoms so nearly resembling morphine poisoning. I had no doubt in the morning but the intense pain having passed off, it left a weakness which allowed the morphine to assert itself. The smallness of the pupils would seem to indicate this. We believed the stupor remaining after the effects of the morphine had passed off was due to absorption of some of the elements of the bile by the abraded surfaces of the ducts.

Dr. Wm. Bailey: I am not surprised that Dr. Smith thought the influence was due to morphine, and I am inclined to

believe that the symptoms were due to morphine, primarily at any rate. I do not think that the absorption of cholesterine would give a respiration of two and one-half or three to the minute. I am satisfied that in a person not accustomed to it, three grains of morphine is quite sufficient to account for the narcosis that was present. I think it can be established that while persons are suffering intensely with pain, such as characterizes the passage of gall-stone or gravel, they can bear a great deal opium without any evidence of opium narcosis; but suddenly being relieved of pain (which is a physiological antidote to opium) by the gall-stone passing into the duodenum or the gravel into the bladder, all the evidences or symptoms of opium poisoning will then develop. I think we should be extremely cautious about the amount of morphine we have ready for either absorption or for action when pain should terminate. I think oftentimes we are pushing and crowding a remedy up to that point that as long as pain exists it is safe, but when pain shall terminate by cessation or removal of the conditions, then that amount of opium given during the existence of pain becomes a dangerous element in its action.

I am well satisfied from the history of the case as given by Dr. Smith, if I may be allowed to criticise the case, that it was opium poisoning, at least primarily, the influence not being fully exerted until after the patient had gotten sufficient relief to go to sleep; until the conditions opposing the action of the morphine were removed, then the toxic influences were developed. Something in the late part of the case, of course, may have been due to the absorption or may be from the retention of the poison in the blood. But with a contracted pupil, with respiration of two and one-half or three to the minute and with the administration of three grains of morphine, I am irresistibly drawn to the conclusion that much of the manifestation was due to morphine, whatever may have developed, or whatever may have existed later on.

Dr. R. C. Chonault: I was going to say that I could reconcile the seeming differences between the two gentlemen: Everyone who is at all familiar with the administration of morphine or opium, knows the dangers of it—first the stimulating effects, then afterward the tendency of opium we all know is to lock up the secretions of the skin; therefore, the position taken by Dr. Smith and the position also taken by Dr. Bailey, in my mind, could be very well reconciled. The effect of opium stopping the secretions, which has a tendency to leave the patient in that condition so common as described by Dr. Smith in the last stages of this case, is satisfactory to my mind that there may have been some poison in the blood from the effects of the opium.

Dr. D. T. Smith: I believe that the condition of the pupil must have been due to the morphine. I think the depression was either produced or greatly influenced by it. The length of time (twenty-six hours) after the morphine had been stopped, and the delirium which lasted three days thereafter, showed that there was something in addition to the morphine.

HÆMORRHAGE AFTER TONSILLOTOMY.

T. Mark Hovell writes as follows in the *British Medical Journal*:

A girl, aged about 20, had her left tonsil excised at the Throat Hospital, and severe hæmorrhage ensued. The application of cold and astringents having failed to check the bleeding, pressure was resorted to, which controlled it for the time, but it recurred as soon as the pressure was removed.

As the case was beginning to assume a serious aspect, it was evident that something must be done to speedily stop the hæmorrhage. It occurred to me that the failure with astringents was due to their being improperly applied, and I therefore mixed one part of gallic acid with three parts of tannic acid, and after adding a few drops of water, kneaded the powder into a very stiff paste. Having rolled some of it into a ball about the size of a marble, I introduced it into the mouth on my left forefinger, and rubbed it firmly into the bleeding surface, at the same time making counter pressure from the outside with my right hand. As the result of this treatment the bleeding quickly ceased and did not recur.

I have since met with a few cases of hæmorrhage following tonsillotomy, and in each of them the bleeding has been quickly and easily stopped by the treatment I have above mentioned.

Selected Formulæ.

HEMICRANIA.

PASTILLES.

℞ Phenacetin.....3 grams.
Caffeine and Sod., Salicyl.....0.15 gram.
Quinine Hydrochlorate.....2 grams.
Morphine Hydrochlorate.....0.05 gram.
Saccharine.....0.01 "
Divide into 10 pastilles.—One per dose.

—*Schlutius.*

VAGINAL INJECTIONS.

Dr. Budin (Paris) uses the following formula:

℞ Mercur. corrosiv.....gr. iv.
Acid. tartaric.....gr. xv.
Sol. alcoholic indigo carmine (1:25).....gtt. j.
Sufficient for one quart of water.

Dr. Charpentier (Paris) employs the following solution:

℞ Cupri sulphat.....5 jiss.
Aquæ distillat.....f ʒ xxxij.

—*Formulaire Aide-Memoire de la Faculté Médecine de Paris.*

CYSTITIS IN WOMEN.

In cystitis in women (*Deutsche med. Wochenschrift*, No. 21, 1892) introduce a tampon into the vagina covered with the following salve:

℞ Camphorated lanolin.....30 grams.
Extract of belladonna.....2 "

OINTMENTS.

Dr. Wende (*Buff. Med. and Surg. Jour.*, January, 1892) lays down the following essentials for a good ointment basis:

1. *Proper Consistence.*—It must be soft, smooth and pliable, readily admitting of a uniform application.

2. *Homogeneity.*—It must be perfectly homogeneous, free from grittiness and irritating bodies.

3. *Durability.*—It must not show a tendency to change its physical and chemical peculiarities on exposure or long keeping.

4. *Miscibility.*—It must be capable of easily receiving the ingredients to be combined or incorporated.

5. *Power of Imbibition.*—It must be capable of absorbing liquids, especially water.

6. *Limitations of Temperature.*—It must have a melting-point somewhat higher than the temperature of the body. It must not liquefy.

7. *Inability to produce Irritation.*—It must be perfectly bland and neutral in reaction.—*N. Y. Med. Journal.*

AROMATIC LAXATIVE ESSENCE.

This is officinal in the Strasburgh Pharmacopœia. It is an excellent laxative:

℞ Black hellebore.....60 parts.
Jalap.....60 "
Scammony.....30 "
Canella.....12 "
Cloves.....12 "
Calamus.....12 "
Proof spirit.....750 "
Mix, and macerate the drugs in the spirit for eight days. Strain, express, and filter.

An excellent substitute for the above may be made by dissolving 1 part of resin of jalap in 9 parts of alcohol, and flavoring with a little oil of lemon and oil of bergamot.

HEPATIC COLIC.

Dr. Lemoine (*Revue Thérapeutique medico-chirurgicale*, November 1, 1891) uses the following methods in the treatment of hepatic colic. If vomiting is present he has recourse to ethereal solutions or those containing chloroform, as follows:

℞ Syrup of acacia.....fl. ʒiv.
Ether.....fl. ʒj.

Or:

℞ Chloroform.....Mxv.
Tincture of myrrh.....Mxv.
Mucilage of acacia.....fl. ʒj.
Syrup.....fl. ʒiijss.
A teaspoonful of either of these prescriptions every fifteen minutes.

If vomiting is a pressing symptom, it may be relieved by small pieces of ice and sedative drink, aiong with very small quantities of cold beef tea or milk. A turpentine stupe or other hot application may be applied to the abdomen, which should be covered with a rubber cloth to keep in the heat and moisture. Dry heat may be used instead of moist if desired. Liniments are without effect, and mustard plasters injure the skin, but prolonged and very hot baths are of service. The writer also uses the following suppositories:

℞ Extract of belladonna, Extract of opium, āā 1-3 gr.
Cacao butter.....5j.
Sufficient for one suppository.

Or:

℞ Extract of opium.....1-6th gr.
Cacao butter.....5j.
Sufficient for one suppository.

ANAL FISSURE.

ENEMA.

℞ Krameria extract..... 1 gram.
Glycerin..... 40 grams.
Water.....120 "
Inject every other morning.

—*Gallois.*

ILEO-COLITIS.

Van Goidtsnoven has obtained most satisfactory results from the following:

℞ Hydrarg. chlorid. mit.....gr. i.
Bismuth salicylat.....
Salol..... āā gr. xii. M.
Pulv. carbo ligni.....
Div. in chart, No. xii.
Sig.—One powder every four hours.

Antiseptic irrigation of the bowels is also to be employed.—*Southern Med. Record.*

TINCTURE OF GINGER AND PODOPHYLLUM.

The solubility of resina podophylli in tincture of ginger affords a ready and efficient method of administering this valuable drug in cases where the use of it has to be persisted in for any length of time. H. A. Hare, in "Practical Therapeutics," advises that the drug should be given dissolved in alcohol (1 grain of the resin to 1 dram of alcohol), which could then be dropped in suitable doses on a piece of lump sugar. But with this method the carminative and stomachic effects of the ginger are, of course, absent, and we therefore propose the following:

℞ Resinæ podophylli.....gr. jj.
Tinct. zingiberis.....fl. ʒ j.
M. et sig. Dose.—One teaspoonful in a glass of sweetened water on retiring.

MENTHOL IN ITCHING.

Dubrieulh recommends the following for itching:

℞ Menthol.....2 drachms.
Almond oil.....3 ounces.
Mix, and apply.

SURGICAL TREATMENT OF GASTRO-INTESTINAL CANCER.

John Lindsay Steven, in tne *British Medical Journal*, of April 23, 1892, reviews the history of this affection with the object of deciding the question as to when operations are advisable. He states that it may be admitted that cancer of the stomach can be successfully removed in some cases and the patient's life thereby prolonged. Pylorectomy, however, is still regarded as being in the experimental stage. The reason assigned why many of the cases are not presented for operation until late in the course of the disease, is that the affection often remains for a long time latent, that is, they do not exhibit symptoms which are sufficiently characteristic. As a rule, when the tumor becomes readily recognizable, the time for operation has passed. The question of adhesions is also an important one and quite difficult to decide previous to operation, although nourishing the patient per rectum and examining under an anæsthetic may, in some cases, enable the condition to be diagnosed. The use of effervescing powders for this purpose is not regarded favorably. The writer gives an account of twenty-six cases of gastro-intestinal cancer; in nineteen the stomach was affected. In sixteen out of these, secondary growths were present. The existence of secondary growths would not always be discovered by an exploratory laparotomy, on account of their concealed situation. The character of the tumor is of more importance in relation to malignancy than is the size. He concludes with the following expressions of personal opinion:

(1) In the present state of our kn owledge and diagnostic symptoms of gastric cancer the radical operation of pylorectomy can only be very rarely justifiable.

(2) As all radical operations, if there is to be the slightest chance of ultimate success, must be undertaken as early in the course of the disease as possible, any exploratory abdominal incision, made merely with a view of finding out whether the tumor is suitable for attempting removal, and not for the palliation of distressing symptoms, can only be justifiable if the patient can be assured with tolerable confidence that he will not be worse after the operation than he was before it.

(3) Gastro-enterostomy and other palliative surgical procedures are likely only to be undertaken in the later stages of the disease, as a means of relieving distressing symptoms, of rendering life more bearable, and of probably postponing the fatal issue, and they are in the highest degree justifiable in all suitable cases. Under such circumstances, at a comparatively late stage of the case, and under the pressure of great bodily suffering, an exploratory incision with a view to palliation is quite justifiable.—*Univ. Med. Mag.*

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Leading Articles.

THE TREATMENT OF CHRONIC METRITIS AND ENDOMETRITIS.

A great deal has been written from time to time by gynæcologists both in this country and abroad regarding the treatment of chronic metritis and endometritis, and many methods have been held up to the profession in the light almost of specifics. Nevertheless, it must be admitted that however all-embracing our therapy of these diseases is, it cannot be said to have been brought to that state of perfection where nothing further is needed. What is specially desired is some efficient means which can be used without much trouble or the necessity of the skill of the specialist. Such a therapy seems offered by Dr. Hans Dörfler, in a recent issue of the *Münchener med. Wochenschrift.*

The method consists in an intrauterine cauterization by means of a chloride of zinc solution. This was originally brought forward by Dr. Rheinstädter, of Cologne. The solution used is one of equal parts of water and chloride of zinc. The surgical armamentarium that is necessary is most simple, consisting of a speculum, uterine sound, two aluminum applicators, and a bullet forceps or tenaculum; besides these only absorbent cotton and glycerine.

The patient is placed upon her back, with her limbs flexed, in the ordinary position for vaginal examinations, and after the introduction of the speculum, one of the applicators with a pledget of cotton wrapped around the end introduced into the uterine cavity to wipe out any secretion that may be present, and immediately afterwards the second applicator, similarly wrapped with cotton, but also soaked in the solution of chloride of zinc, is quickly introduced into the womb before the internal os closes, and left there for perhaps a minute. Immediately there will be noticed a different character of discharge flowing into the speculum, and

this should be carefully soaked up with absorbent cotton to prevent any cauterization of the abdominal walls. After the removal of the applicator and the douching of the vagina, and while the speculum is still in place, a tampon of cotton about the size of a walnut and soaked in glycerine is pushed up close to the mouth of the womb. The tampon should be supplied with a double silk thread eight or ten inches long, to facilitate its subsequent removal. The speculum is then withdrawn, and after the lapse of twelve to twenty-four hours the tampon is also removed by the patient by means of the thread.

The introduction of the applicator in patients who have borne children usually presents few or no difficulties, especially if it is was bent in the curve of the cervical canal. If in the case of nulliparæ a difficulty in passing the sound is encounted the cervix may be held with the bullet forceps or tenaculum, which will greatly facilitate the passage.

The pain caused by the cauterization is usually *nil*.

Rheinstädter performed the operation several thousand times without even having an unfavorable complication. It is well to inform the patient that for a day or two following the operation she may expect a copious discharge containing pus.

The cauterizations should be repeated weekly, or at most only twice a week, but should always be omitted five days before the expected appearance of the menstrual discharge, and for four days after the cessation of the discharge. Ten or twelve such applications usually result in a complete and permanent cure.

The cauterization acts upon the substance of the uterus as well as upon the uterine mucous membrane. The diseased mucous membrane must be fully *ad integrum* regenerated. Upon the substance of the uterus itself the cauterization not only increases the supply of blood, but stimulates more forcible contractions, whereby both absorption and tissue reconstruction are augumented.

The principle indications for the treatment consist in the presence of those unbearable nervous difficulties coupled with endometritis, abundant and weakening menorrhagias, exhausting leucorrhœa, and a condition of long standing sterility. Dörfler has used the method in quite a number of cases, in the majority of which he obtained a complete cure after six or eight operations, and twice after a single cauterization.

APHASIA.

Dr. Knoblauch reports an interesting case of disorder of the articulating capacity from cerebral disease. The patient, a child six years old, presented motor aphasia and right-sided hemiplegia following acute encephalitis, consequent upon scarlatinal nephritis. From the beginning of the aphasia, which was permanent, the patient was incapable of spontaneous speech, although he appreciated perfectly everything that was said to him. The curious part of the case was, that articulation was possible when the little patient attempted to sing familiar airs (*Centralblatt f. klinische Medicin*).

The report of this case recalls to the writer similar phenomena presented by a patient who came under her notice some years ago. With the exception of the attack to be related, the young woman was in perfect health, was highly intelligent and anxious to be cured of her affliction. About once a year, for a number of years, the patient was suddenly seized with an attack resembling very much that of catelepsy, from which she would emerge with complete aphasia. During the asphasic period, which sometimes extended over several months, the patient was able to attend her duties as a public singer, articulation being perfect in singing voice. The restoration of the voice would be observed after an attack of less severity than the one in which the voice was lost. In the interval between the seizures the voice was natural and the patient in good condition.

Book Reviews.

INTRODUCTION TO THE ANTISEPTIC TREATMENT OF WOUNDS: According to the method in use at Professor Bilroth's Clinic, Vienna. Arranged for Students and Physicians. Translated, with the author's permission, from the German of Dr. Victor R. V. Hacker, Assistant in the Bilroth Clinic, Professor of Surgery, Surgeon to the Allegmeine Polyclinic and the Erzh. Sophienspital, in Wien. By Surgeon-Captain C. R. Kilkelly, M. B., Army Medical Staff. London: Percival & Co. Philadelphia: P. Blakiston, Son, & Co., Price, $1.00.

This admirable little book is a most excellent exposition of the antiseptic treatment of wounds, and is worth many times its cost to any one engaged in surgical practise. In it we find articles on the general principles of the antiseptic treatment of wounds, preparations before the operation, procedure during the operation, special measures for laparotomy, dressing materials and their use, antiseptic dressing of wounds, and a list of firms (Vienna), where most of the important clinical dressings and apparatus can be obtained, with their cost.

It is a work that should be in every physician's library and in constant use.

AN EPITOMIZED REVIEW OF THE PRINCIPLES AND PRACTISE OF MARITIME SANITATION. By Joseph Holt, M. D., Former President of the Louisiana State Board of Health, 1884–1888. New Orleans: L. Graham & Son, 1892.

This pamphlet of nearly 100 octavo pages gives a considerable amount of sanitary information, especially relating to the maritime sanitation at the quarantine stations of the Mississippi river, below New Orleans. It contains thirteen plates illustrating various matters connected with disinfection.

TRANSACTIONS OF THE AMERICAN DERMATOLOGICAL ASSOCIATION AT ITS FIFTEENTH ANNUAL MEETING HELD AT WASHINGTON, D. C., ON THE 22nd, 23rd, 24th, AND 25th OF SEPTEMBER, 1891, IN CONNECTION WITH THE CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS. Official Report of the Proceedings by George Thomas Jackson, M. D., Secretary. New York, 1891.

These transactions contain besides the Address of the President and Committee Reports twenty-six papers on various topics of special interest to dermatologists, and various discussions connected therewith. It is a very creditable report.

Correspondence.

PEPSIN AND ALLIED PREPARATIONS.

Editor of THE MEDICAL AMD SURGICAL REPORTER:—I am told by the agents of pharmaceutical manufacturers that the use of pepsin and allied preparations is on the increase among physicians. In the aggregate this may be true, but there is another view to take of the matter. Since this remedial, or rather digestive agent has been so elegantly prepared by the pharmaceutists, many physicians have fallen into the habit of prescribing it to patients freely and frequently, when nothing but placebos are required. In my acquaintance, among those physicians who do not live in towns where there are drug stores, and who have to furnish their own remedies, many practitioners are giving less of the pepsin preparations. One physician said he prescribed many pounds of it four years ago, in one year, but now had entirely ceased using it, and relied upon common tonics and the natural source of pepsin for digestion.

A large majority of the staff of the Memphremagog Hospital Clinic are either giving or prescribing pepsin preparations in lesser quantities or none at all. In my own private practice I am giving pepsin less frequently than formerly. I find that it may be given for a few days with apparent good effect, but if long continued it weakens digestion, and seems to take the place of the natural product. I have found, by experiment, many of the preparations on sale in the shops inert and useless. Anybody can test the digestive properties of the different preparations on milk in a few minutes. None, of course, should be given that have become inert.

JOHN M. CURRIER, M. D.,
Newport, Vermont, Aug. 18, 1892.

PRURITUS VULVÆ.

The wash described below has been found useful by Dr. Bulloch, in cases of pruritus vulvæ:

℞ Aluminii nitras.....gr. xxiv.
Aquæ .....ʒ iv.
M. Sig.—Wash the parts once or twice a day, and use as a vaginal injection in the same way.

—*N. E. Medical Monthly.*

Periscope.

THERAPEUTICS.

HYDROGEN PEROXIDE IN MIXTURES.

Mr. F. X. Moerk was led to made some experiments in order to determine the nature of the decomposition which ensued in putting up the following prescription: Tr. ferri chlorid. 2 cc., glycerin, 8 cc., hydrogen peroxid. 24 cc. The results were laid before a pharmaceutical meeting of the Philadelphia College, and are given in a paper in the *Am. Jour. Pharm.* for March. It was found that in making the mixture an immediate deepening of color followed, the temperature rose from 29° to 64°, and a decided odor of aldehyde and acetic ether were apparent. It was found that the decomposing action was due to ferric chloride in the presence of the alcoholic tincture, the hydrogen peroxide being reduced and the alcohol oxidized, free oxygen passing off. The ferric salt was not at once reduced to the ferrous condition. Experiments on the iron salt led to those on others, of which may be noted potassium ferrocyanide, ferrous sulphate, stannous chloride and lead acetate, which all produced decomposition of the peroxide, with evolution of oxygen. Magnesium sulphate, zinc sulphate, copper sulphate, alum, and mercuric chloride did not produce decomposition in 24 hours, but the addition of a few drops of sodium hydrate liberated oxygen in the case of mercuric chloride and copper sulphate. With silver nitrate the action was slow in the absence of sodium hydrate, but then energetic. The results of these experiments lead to the practical conclusion that in prescribing and dispensing hydrogen peroxide, its ready decomposition must be remembered, and it will not do to make desirable combinations unless experiments prove them to be practicable.

THE TREATMENT OF CANCER.

Under this head Dr. G. Sims Woodhead, in the Morton lecture on the ætiology of "Cancer," says: "From a careful microscopical examination of many hundreds of cancers that have been submitted to me for examination, I am firmly of the opinion that many surgeons make the mistake of not removing sufficiently freely either the tissues in which a cancerous growth has made its appearance or the lymphatic glands associated with it. Quite recently Mr. Harold Stiles, of Edinburgh, has carried on an extensive and careful investigation of how far the immediate tissues around the naked-eye cancer of the breast are affected. His method is based on the effect which nitric acid has upon the tissues, causing the connective tissue to become clearly differentiated from the epithelium. From a careful study of sections so prepared, both by Mr. Stiles and myself, as well as from microscopical examination, I am convinced that the only safe rule to be observed in removing cancer of the breast is to remove not only the main mass of the gland, but all outlying portions of the glandular tissue; so that if, on cutting away the margins of the tumor, treating with methylated spirit and nitric acid, and then with water, any opaque columns or fragments are to be seen, I should consider that the removal had not been free enough. Of course, the part of the tumor that should be especially examined in such a case is that near the sternum, where, by reason of the shape of incision usually adopted, there is the greatest danger of fragments of the gland being left."—*Maryland Medical Journal.*

THE PHYSIOLOGICAL ACTION OF ABDOMINAL MASSAGE.

Dr. Victor Eltz, having studied the contributions of Reibmayer and Nothnagel, believes that the action of massage in chronic intestinal catarrh depends upon the resorption of the infiltration of the wall of the intestine. In this view massage does not meet the indication of one symptom, but rather attacks the cause itself. The indications for the several methods for evacuation are: 1. For simple clearing of the bowels, *e. g.*, intestinal stenosis, internal purgatives. 2. For congenital hypoplasia of the muscular structures of the intestine, especially of the large intestine, irrigation. 3. In constipation, in general weakness, gymnastics, especially when lack of exercise is the cause. 4. Massage is indicated in—(*a*) true habitual constipation; (*b*) chronic intestinal catarrh (equally whether accompanied by diarrhœa or atony).—*Wiener klinische Wochenschrift*, 1892, No. 15, S. 221.—*Amer. Jour. Med. Sci.*

TREATMENT OF MORPHINISM.

Obersteiner individualizes strictly in the treatment of the morphine habit. Beginning with the average daily dose, he withdraws it as rapidly as the patient can stand it. When the dose has been reduced to a few centigrammes caution is necessary, as even a slight reduction is then badly borne. At this stage warm baths of from 5 to 15 min. duration, followed if necessary by the cold shower or cold pack for one-half to two hours at a temperature of 77° to 86° F., are often of benefit. Alcohol in liberal quantities often gives relief. Cocaine has no other use than to modify the symptoms and should only be used when these become violent, say 24 to 48 hours after the last dose of morphine. It is always given by mouth in doses of 0.05 to 0.1 gm., never exceeding 0.5 gm. per day. It should be reduced in a few days and never continued longer than 5 or 6 days. Nutrition must be improved by all possible means. If collapse occurs, morphine must be resorted to. Patients with cardiac troubles should not be subjected to complete withdrawal.—*Wien. Med. Presse,* No. 48, 1891.

INJECTIONS OF AMMONIO-CITRATE OF IRON IN CHLOROSIS.

Dr. Alvazzi, of Turin, has successfullly treated chlorosis by means of injections of ammonio-citrate of iron. For three months various preparations of iron had been given in considerable doses without benefit, and the patient had became so weak as to be unable to leave her bed. The red corpuscles, which were pale, averaged 4,000,000, per cubic millimetre, and there was slight leucocytosis. As the internal administration of iron had failed, it was determined to try injections of the ammonio-citrate according to the following formula: Ammonio-citrate of iron, grains 17; distilled water and laurel water, one and a quarter drachms each. The injections were given with an ordinary Pravaz's syringe. One-sixth of a grain of the salt was given once a day, the amount being gradually increased till on the ninth day it had reached two grains, still given in one injection. On the sixteenth day, no ill effects having been observod, two injections of two grains each were given each day, and after thirty days the patient was discharged cured. Two or three of the injections were given under the skin, but this having on each occasion caused severe pain, all the others were made into the substance of muscles. The injections were given with strict antiseptic precautions, and were always followed by somewhat vigorous and prolonged massage at at the seat of the injection. Pain seldom lasted long, and no abscesses or even swelling followed the injections nor did the temperature rise. When discharged, the red corpuscles had recovered their natural color, and averaged 4,350,000 per cubic millimetre, and the proportion of white corpuscles was normal. The hæmoglobin had risen from thirty-five to over ninety-five and the girl's weight increased from 72 to 84 pounds. Her appearance and general health had improved immensely.

TYPHOID FEVER SUCCESSFULLY TREATED WITH FEL BOVIS.

Dr. Adolph Zeh, after an extended use of the various antipyretics and intestinal antiseptics, reports favorably upon the use of this remedy in ten cases. He empties the alimentary canal by a sufficiently large dose of calomel, if the case is seen clearly; stimulates at once, preferably with whiskey; uses strychnine, caffeine, ammonia, camphor, and small doses of quinine; as a beverage, dilute nitro-muriatic acid in a large quantity of water, and fel bovis purificatum siccum in doses of two to four grains from three to six times daily in capsules. A liquid diet—milk, beef-tea, gruel, beef extracts or meat juices—is insisted upon.—*Merck's Bulletin*, 1892, No. 2, p. 83.

NEW CONTRIBUTIONS TO THE THERAPY OF MALE IMPOTENCE.

Dr. Victor v. Gyurkovechky has seen improvement in five cases of paralytic impotence, although only temporarily, from suspension. In three cases of sexual neurasthenia complete and satisfactory cures resulted. Suspension of healthy males was always followed by increased sexual desire. He also believes that hypnotism will be found a powerful therapeutic agent in the treatment of onanism, spermatorrhœa and various forms of impotence, and relates several cases to fortify his position. He also banished troublesome and constant erotic dreams in a single lady of 20 by this means, at the sixth seance.—*Wien. Med. Presse*, No. 47, 1891.

STYRONE IN MIDDLE EAR SUPPURATION.

A 1 to 5 per cent. solution of styrone (which is a compound of styrax and balsam of Peru) in alcohol is recommended in chronic inflammation of the middle ear. Dr. Spalding recommends it as specially useful in perforations of Shrapnell's membrane. He applies it on a small cotton swab after having had the ear thoroughly cleansed by syringing, and from results obtained he thinks that it merits a trial.—*Archives of Otology*, July, 1891.

THIOPHEN.

An unsigned paper in the *Revue de Thérapeutique Générale et Thermale*, 1892, No. 5, p. 70, gives an excellent *résumé* of this subject. Thiophen is a hydro-carbon of the aromatic series, a colorless, limpid oil, of faint odor, and miscible with water in all proportions, having as its symbol C_4H_4S. Spiegler has used the thiosulphate of soda ($C_4H_3CNaS_3$) and the iodide of thiophen ($C_4H_2I_2S$). The soda salt is a white powder, precipitated in the form of scales, contains 33 per cent. of sulphur, of a disagreeable odor which is usually not marked when in a 5 or 10 per cent. ointment. In prurigo complicated by eczema it can replace naphthol. The biniodide has been used as a substitute for iodoform. It crystallizes in beautiful plates, insoluble in water, but very soluble in ether, alcohol and chloroform. Its odor is characteristic, but not disagreeable; gauze impregnated in a proportion of 10 per cent. emits a slight odor, rather agreeable and aromatic. This salt, in the laboratory, will prevent the development of the *staphyloccus aureus*. In burns even to the third degree; so far as preventing odor and desiccation, it is superior to iodoform. Hock has used it in various conditions, phlegmon, contused wounds, lacerations, compound fractures, mastisis, onychia, and caries, with very satisfactory results. There seems to be no poisonous action; it does not give rise to eczema, it even seems to cure it when existing. Applied as a powder it is a vigorous disinfectant, and may even give rise to a burning sensation which may persist for half an hour. It will deodorize more energetically than iodoform, but it is a less active stimulant of granulation-tissue.—*Amer. Jour. Med. Sci.*

MERCURIAL OINTMENT IN INTERSTITIAL KERATITIS.

Mitvalsky (*Centralbl. f. prakt. Augenheilk.*, February, 1892) strongly recommends the use of an ointment composed of mercurial ointment 1 part, vaseline 2 parts, lanoline 1 part, in cases of parenchymatous keratitis, etc., as a valuable means of shortening the duration of the attack and clearing up the opacity of the corneal tissue. He has employed this for the last three years, and from his experience in more than 100 cases feels enabled to speak very encouragingly of its effect. Having tried the ordinary blue ointment and having found that it gave rise to too much irritation of the conjunctiva, he advises a more dilute preparation made according to the above formula. The ointment should be placed in the conjunctival sac, and rubbed in gently with the finger placed over the eyelid. It should not be used in cases with marked ciliary injection.—*Brit. Med. Jour.*

THE USE OF ELECTRICITY IN CHRONIC AFFECTIONS OF THE MIDDLE EAR.

Baxter (*Arch. of Otol.*, xx, 3) reports ten cases of disease of the middle ear treated by the constant current. He thinks that when improvement takes place it is most noticeable in the increased ability to understand speech, the tinnitus is lessened, the feeling of pressure, fullness, and dullness are lessened or removed. The method of application is as follows: After placing the patient with the head inclined the external auditory canal is filled with warm water, the aural electrode (a small wire insulated to within two millimeters of its point) is introduced into the auditory canal and retained there by the fingers of one hand, leaving the other hand free to manipulate the switch, rheostat, and pole-changer; the other electrode, covered by a sponge, is held in the patient's hand. The current is then switched on and gradually increased, watching the milliampèremeter until from five to ten milliampères of current are passing through the parts; then, retaining the electrodes in position, the poles are changed two or three times a minute. From three to six minutes suffice for an application. The ear is then dried and the patient kept quiet for a short time to recover from any possible vertigo.

THE PEROXIDE OF HYDROGEN IN PURULENT CAVITIES AND FISTULÆ

Dr. Graff (*Med. Neuigkeiten*, No. 2, 1892) has used this drug in cases where a complete opening of the fistula or abscess is impossible. Here irrigation with the peroxide has an excellent action, superior to that of the other antiseptics. The great formation of gas which follows the contact of the antiseptic with pus or blood permits the pus to be removed very thoroughly. If then an antiseptic bandage be applied healing takes place very rapidly. If, in cachetic individuals, the granulations are weak and slow in growth, one may alternate with injections of equal parts of ether and balsam of Peru. This procedure is of great value in suppurating cavities with indurated edges, as, for example, in the separation of sequestra. The remedy has also been used with success in dacrocystitis and purulent conjunctivitis. Where the drug in injected into cavities one must see that there is free exit for the gas, which quickly forms; otherwise the pressure might cause trouble, as for example, after opening cerebral abscesses, injection of pleural fistula, etc.

SUBCUTANEOUS INJECTION OF SALT SOLUTION IN DIARRHŒAL COLLAPSE.

Demieville recommends the subcutaneous injection of sterilized salt solution in the collapse produced by acute gastro-enteritis in infants. The apparatus required is simple. The salt solution used is a solution of chloride of sodium (0.6 per cent.) As the solution is rapidly cooled by passing through the tubing, it is well to employ a large reservoir, and to be sure that the solution as it leaves the needle is warm. The skin must be thoroughly disinfected, and also the needle and apparatus; the water should be boiled before use.

As to the quantity to be used, a case is related in which a child, aged four and one-half months, received about four ounces; the injections were made into the thighs, and were followed by gentle massage. The patient in the case mentioned appeared to be *in extremis* when the injections were given, but began to improve almost at once, and reaction was established in a few hours. The injection made the child cry, but did not seem to cause much suffering. The good results obtained by this method are believed to be due to the improvement produced in the circulation, especially in that of the nervous centres.

HYPNOTISM IN THE PSYCHOSES.

Dr. J. Luys states (*Jour. de Med, de Paris*, Mch. 20, 1892) that in the acute periods of insanity, in lucid intervals, and in latent hysteria, nothing is better than hypnotism. Certain paretic dements with quiet hypomania are fascinated and calmed by a bright object. Rotatory mirrors calm and sooth them so that they fall asleep. They awaken from the artificial slumber refreshed and invigorated mentally and physically. In acute hysterical hallucinatory insanity in young girls, the patients are plunged rapidiy into slumber, and such slumbers decrease the period of convalescence.

TINCTURE OF IODINE IN CORNEAL ULCERATIONS

In 1891 Dr. Chibret published a method of treating certain forms of ulceration of the cornea by means of tincture of iodine, which he regards at possessing powerful antiseptic properties and energetic dialytic powers; as being free from liability to precipitate insoluble saline compounds, leaving indelible opacities in the cornea; and lastly as having no destructive properties on the cornea. He thinks it may be applied by means of a little roll of cotton wool to the surface of the ulcer, and that the application should be made once or twice daily. Such treatment prevents, he believes, the staphylomata that are apt to form after the cicatrization of large ulcers. M. Sedan, in a subsequent communication, states that several years ago, finding some forms of ulcers of the cornea rebellious to ordinary treatment, he adopted the plan of touching the ulcerated surface, first lightly and then more freely, with tincture of iodine. He found however that it was objectionable because it was painful; because—however carefully applied—it rapidly distributed itself over the urface of the cornea; and lastly, because it formed deposits in the inferior *cul-de-sac* of the conjunctiva. It also has a tendency to produce ciliary blepharitis. If however, some good menstrum could be found, it seems that it might sometimes prove serviceable.—*Recueil d'Ophthalm.* p. 710, 1891.

PERMANGANATE OF POTASSIUM IN THE TREATMENT OF DIPHTHERIA.

Bowman reports several cases of diphtheria in which most excellent results were obtained by the use of a solution of permanganate of potash of the strength of theee grains to the ounce. Three or four applications an hour were made directly to the membrane with a large camel's-hair brush for eight or twelve hours. After this once every two to six hours is sufficient. In some cases a spray is a better method of application.

THE TREATMENT OF HYPERTROPHIED TONSILS.

Knight (*Jour. Am. Med. Assn*, 1891, xvii., 537.) states that the treatment of enlarged tonsils may be divided into medical and surgical. The former may be dismissed in a few words, since clinical experience shows that the hypertrophied tonsil yields slowly, if at all, to internal medication, except, perhaps, in struma or anæmia. In such cases hygiene, diet and tonics may have a limited influence. The same is true of local applications resorted to for the purpose of promoting absorption.

The following enumeration includes most of the methods which have been or continue to be practiced. Some of them have long since been abandoned, while others have never found favor except in the hands of their promoters: 1. Electrolysis. 2. Massage. 3. Chemical caustics. 4. Galvano-cautery puncture or ignipuncture. 5. Avulsion with forceps. 6. Ligation. 7. Enucleation by means of the finger. 8. The cold wire snare. 9. The galvano-cautery snare or amygdelotome. 10. Excision by means of scissors, the bistoury, or the guillotine.

In the large majority of cases, excision is the operation of choice. In tractable cases the knife may be used with safety, but it is difficult to see that it has any advantage over the guillotine. The latter. if properly handled, will give an equally good result, and is undoubtedly safer. The extirpation of the tonsil should be made as radical as possible for two reasons: 1. Tendency to recrudescence is lessened. 2. Danger of hæmorrhage is diminished.

There is no question that Mackenzie's modification of Phynik's well-known guillotine is incomparably superior to all other instruments. The addition of a fork to the guillotine not only complicates the operation, but adds to the difficulty of keeping the iustrument aseptic. This instrument commends itself because of its strength, its simplicity, its safety and its effectiveness.

There no doubt exists some prejudice against the use of an anæsthetic in removing tonsils. Avoid profound anæsthesia, remove the tonsils in quick succession, immediately turn the patient upon the face, and fatal asphyxia cannot occur. In young children we should use ether or chloroform, not only to obviate mental and physical suffering, but, what is much more important, to enable us to explore the naso-pharynx at leisure, and if necessary to remove from that region those collections of lymphoid hypertrophy so often associated with similar overgrowths between the palatine folds.

A CASE OF PULMONARY GANGRENE TREATED BY ANTISEPTIC INHALATIONS AND THEN BY SURGICAL INTERFERENCE.

M. M. Constantin Paul and Ch. Perier, (*Bulletin de l' Academie de Medicine*, March 15, 1892) gives the following account of a case:

MD., æt. 58, was seized with a severe bronchitis, his expectoration soon becoming fetid. On examination a focus was found on the left side posteriorly, marked by very fine râles. The disease progressed and symptoms of gangrenous septicæmia developed, with chills, cold sweats, diarrhœa and prostration. Antisepsis of the air-passages was then practiced by passing the breathed air through a saturated solution of carbolic acid. Dr. Paul had previously cured fourteen cases in this way. In this case the septic symptoms rapidly disappeared. The sputum continued to be abundant, but lost its fetid character. The patient recovered sufficiently to attend to his business. An area without respiration remained at the site of the lesion. A month later the symptoms returned, and again the same treatment succeeded. Nearly a month later another relapse occurred and about 300 g. of fetid pus was coughed up at once. Similar relapse recurred at intervals for many months. Signs of a cavity developed at affected spot and the urine contained sugar. Dr. Perier was now called in and confirmed the diagnosis. An opening was

made between the clavicle and mamma, the healthy lung tissue punctured with a trocar and a cavity with viscid pus discovered at a depth of one-half inch. After carefully cleansing the cavity drainage tubes were introduced. A perfect recovery resulted.—*Univ. Med. Mag.*

PARALYTIC OBSTRUCTION OF THE INTESTINE RELIEVED BY THE CONSTANT CURRENT.

Semmola (*Internationale klin. Rundschau*, 1892, No. 16, p. 641) has reported the case of a man, twenty years old, of nervous temperament, in whom, after the occurrence of dirrhœa, symptoms of intestinal obstruction appeared; to these ischuria was added. Ordinary treatment was without avail, and celiotomy was proposed. From the suddenness of the onset of the symptoms of obstruction after the occurrence of diarrhœa; from the paroxysmal character of the pain; from coexistence of paralysis of the bladder, without previous disease; and from the neuropathic tendency of the patient, a diagnosis of paralysis of the bowel was made, and the application of the constant current was recommended. The positive pole, attached to a catheter, was introduced into the rectum, and the negative pole stroked upon the abdomen in the course of the colon. The applications were made for from eight to ten minutes thrice daily. The symptoms gradually improved, and, after the ninth application, the bowels were spontaneously moved. In the course of ten days the patient was completely restored to health.—*News.*

MEDICINE.

CRANIAL AUSCULTATION.

In cases of vertigo associated with noises in the head, Dr. B. Ward Richardson is in the habit of auscultating the cranium (cranial auscultation) over the mastoids. When the sound is associated with cardiac murmur the bruit may be traced up the carotids and heard over the mastoids. This is increased on lying down. In cases where associated with anæmia a soft murmur may be heard, which is continuous with the first sound of the heart. It is increased on exertion; and when the heart is excited, as from the use of stimulants, a sound similar to the venous hum may be heard.

It is important to make such an examination before concluding that the noises are due to disease of the labyrinth. —*Asclepiad*, October, 1891.

REICHMANN'S DISEASE.

Mathieu (*Arch. Gén. de Méd.*, May, 1892) relates the following case of permanent gastric hypersecretion followed by ulcer. A man, aged forty-two, dated his dyspeptic troubles from a reverse of fortune due to the Russo-Turkish war. He suffered from attacks of pain, typical of gastric hypersecretion, commencing about a couple of hours after food, and increasing for another two or three hours. The pain was often relieved by taking a little food, either solid or liquid. Sometimes vomiting put an end to the attack (see also "Epitome," March 5, 1892, par. 199). Four years ago he was much benefited by washing out the stomach. On admission there was marked gastric dilatation. The gastric juice contained an excess of hydrochloric acid. He was much improved by treatment, and was thinking of leaving the hospital, when he was seized one evening with pain in the epigastrium. He died in two days' time of collapse. At the necropsy the stomach was much dilated and placed almost vertically, so that the greater curvature lay in great measure in the left mammary line, the lower part of the stomach near the pylorus being greatly distended, whereas the pylorus itself was nearly in the usual position. On the anterior surface, about two centimetres from the pylorus, there was a perforation big enough to admit the tip of the index finger. It had obviously been there some time. There was some general peritonitis, but apparently none of the contents of the stomach had extravasated, owing to the position of the perforation. Sections from the cardia showed that the coats of the stomach were thickened and the glands hypertrophied. In the region of the dilatation near the pylorus, the changes in the mucosa were more marked. There was round-celled infiltration and the glands were dilated and cystic. In all cases of permanent hypersecretion there is gastric dilatation. It is evident that hypersecretion is compatible with a considerable amount of gastritis. The parts least affected secrete the gastric juice; those most diseased are digested.

The round ulcer is one of the dangers of gastric hypersecretion, and for this reason passing the tube and washing out the stomach must be used prudently.—*British Medical Journal.*

ADDISON'S DISEASE WITHOUT SUPRA-RENAL CAPSULAR LESION.

Dr. M. Raymond has had under care a 27-year-old woman, who had the first symptoms of Addison's disease early in Jan., 1891 (*Prog. Med.*, Mch. 19, 1892). She died in May, 1891. The supra-renal capsules on autopsy were found healthy. The right semi-lunar ganglion was sclerotic, the nerve-cells were pigmented, vacuolized and thinned; some of them were atrophied. The cord was healthy. In Raymond's opinion this case is additional evidenece in favor of the belief that Addison's disease is a neurosis.

ON SOME NON-VALVULAR HEART MURMURS.

This was the subject of a paper read before the Amer. Med. Assoc. by Dr. N. S. Davis, Jr., of Chicago, (*Ex*). Non-valvular heart-murmurs may give the same physical signs as valvular ones, the same changes also in the size and position of the heart. Not infrequently we have cough, dyspnœa, vascular disturbances, œdema, urinary changes, etc. He related the histories of several cases in which the autopsy showed the cause of the murmurs to be old and tenacious decolorized clots in the ventricles and entangled among the chordæ tendinæ. In one case there was an old calcified plate of connective tissue (the result of a former pericarditis) in the pericardium. The murmur in this latter instance was propably due to irregular muscular contractions in the ventricular walls, causing various eddies in the blood-current. Anæmia also caused murmurs not distinguishable in their physical characteristics from those of valvular lesions.

RELAPSES IN GRANULAR INFLAMMATION OF THE CONJUNCTIVA.

Galezowski (*Soc. de Chir.*, February, 1892) has been struck with the extreme frequency of relapses in granular disease of the conjunctiva, and believes that the cause resides in lesions of the lachrymal ducts which complicate the granular conjunctivitis. These lesions, which exist ninety times in one hundred, are either obstructions or contractions of the lachrymal ducts. If the latter are not treated, the reproduction of the granulations of the conjunctiva is rapid.—*Ther. Gaz.*

HÆMORRHAGES INTO THE LABYRINTH IN CONSEQUENCE OF ANÆMIA.

Dr. J. Habermann, of Prague, reports (*Archiv f. Ohrenheilk.*, vol. xxxii. p. 82), two cases of hæmorrhage into the labyrinth, one in consequence of pernicious anæmia, the other is consequence of simple anæmia. In the first instance, the patient was a young servant girl, twenty-one years old. Post-mortem, among other conditions, revealed hæmorrhages into the meninges, brain, pharynx, pericardium, and small intestine, but none in the retinæ. An examination of the right auditory organ revealed neither micro- nor macroscopic changes in the middle ear. In the cochlea, however, there was a small hæmorrhage in the upper end of the ligamentum spirale, in the region of the anterior periphery of the basal whorl, of the scala vestibuli, and a somewhat larger one in the basal whorl in the upper half of the canalis ganglionaris. Here the blood was between nerve-fibres and the ganglion cells. Extensive hæmorrhages were found in the vestibule in the semi-circular canals; also between the ligaments of the utriculus, on the posterior wall, and on the outer wall, near the posterior edge of the stapes (oval window). Copious hæmorrhage also had occurred near the mouth of the aquæductus vestibuli, and in the external semicircular canal. The extravasation of the blood was supposed to be due to diapedesis. The deafness and tinnitus aurium complained of during life was referred to the hæmorrhages. The vertigo could have been due to the simultaneous lesion in the brain.

The second case of labyrinth-hæmorrhage, the result of simple anæmia, occurred in a young woman twenty years old. In this patient there ensued hæmorrhages into the stomach, the intestines, and then retina. Finally, there occurred hardness of hearing, tinnitus aurium, and, at times vertigo. Treatment of the anæmia was followed by improvement in hearing.—*Amer. Jour. Méd. Sci.*

TWO CASES OF URTICARIA FACTITIA.

Conrad Alt describes two cases of this very interesting phenomenon. One, a girl of 12 years of age, had suffered from motor and sensory paraplegia of the lower extremities. She had completely recovered, but during the course of treatment she possessed the symptoms of urticaria factitia. This condition; which has long been known, described by Bateman in 1821, and more particularly by Dujardin-Beaumetz, consists in a raising of the skin after stroking heavily with the nail. In this manner figures of any description can be made to appear on the skin in swollen and reddened lines.

Another case, aged 20 years, is also reported, in which this condition lasted nearly three years, and was most remarkable in its intensity. Uticaria factitia is found especially in hysteria, neurasthenia and epilepsy.

SARCOMA OF THE URETHRA.

Ehrendorfer (*Centralb. f. Gynäk.*, No. 17, 1892) reports a case of this rare disease. As in Beigel's case, the patient was about 50 years of age; the tumor was a small round-celled sarcoma, forming fleshy wattles in the anterior part of the vulva. Ehrendorfer's patient had noticed a swelling for about eighteen months before admission into the hospital. A watery, sanious, odorless discharge escaped from the tumor, which caused pain during connection. The growths (three in number) pushed the labia aside, and rose high, like cock's combs, running from before backwards; each measured about one inch in length. They surrounded the meatus urinarius. The vagina was slightly prolapsed, the uterus atrophied. The sarcoma was removed on October 29th, 1891. The patient refused to take any anæsthetic. The entire tumor was drawn down with the fingers, and its pedicle, consisting of the mucous membrane of the urethra, cut through. The divided borders of mucosa were united with catgut sutures after a spouting artery had been secured. The parts were dressed with iodoform powder and gauze; the urine was drawn off for a time by means of a soft catheter. The wound had healed at the end of the fourth week. The patient has not been heard of since her discharge.—*Brit. Med. Jour.*

PERFORATIVE AORTITIS.

Oliver (*Lancet*, No. 3558, p. 1033) has recorded the case of a man, age thirty-six years, who thirteen years previously had an aggravated attack of rheumatic fever. Murmurs indicative of the existence of aortic obstruction and incompetency, of mitral incompetency, and of pericarditis were heard and the heart was hypertrophied. Some time later the patient rather suddenly died. At the autopsy, the pericardium was found occupied by a clot entirely surrounding the heart. The heart itself was dilated and hypertrophied. The mitral orifice was dilated, the valves normal. The aortic valves were incompetent. The aorta, just beyond it origin, presented a pouch-like dilatation. Over a small area between the mouths of the coronary arteries, extending upwards about an inch and a half, the lining membrane of the aorta was red, softened, and ulcerated, and in two places gangrenous. From the center of this area a small pouch bulged outward. The walls of the pouch were thin and soft, and perforated at its base by an opening as large as the head of a pin. An atheromatous plate lay close to orifice of the coronary artery. Microscopic examination confirmed the macroscopic evidences of the existence of an ulcerative aortitis, and disclosed in addition the presence at the focus of inflammation of considerable numbers of bacilli resembling those of anthrax. There was no history or knowledge of infection.

THE TREATMENT OF EPILEPSY.

Dr. G. Hinsdale gives his experience in the use of potassium bromide, magnesium bromide, nitro-glycerine, antifebrin and sulfonal. Potassium bromide, he used in 12 cases. The result was satisfactory in one, doubtful in five, unsatisfactory in six. As it is an intestinal irritant and lowers the pulse and depresses the heart, it is not considered a valuable remedy to use. Magnesium bromide exerts an undue power in controlling epileptic attacks, but it is more liable to produce facial eruptions than the other bromides. Nitro-glycerine failed in results. Nitrate of potassium has not been satisfactory. Antifebrin has temporary beneficial results, but it soon lost its power. Sulfonal was unsatisfactory.—*International Medical Magazine*, March, 1892.

THE SYMPTOMATIC VALUE OF THE PULSATIONS NOTICED IN THE EAR BY THE ENDOTOSCOPE.

Gellé (*Ann. des. mal. de l'oreille et du larynx*, xvii, 9) draws the following conclusions from his observations: By the aid of the endotoscope the state of the circulation of the blood in the tympanic cavity can be studied; in active congestion of the tympanic mucous membrane this instrument shows pulsations isochronous with the pulse. This demonstration is especially useful when the objective symptoms are wanting. The pulsations of the endotoscope actually show the activity of the inflammatory process in the middle ear. They disappear when the process declines, but persist as long as the abnormal vascularity lasts. Their absence in certain cases of subjective affections of congestive appearance enable us to localize the seat of the exudation in the deeper parts of the organ, or to recognize the purely nervous origin of the phenomena.

OSTEO-ARTHROPATHY OF PULMONARY ORIGIN.

Orillard (*Rev. de Méd.*, March, 1892) relates a case of this disease first described by P. Marie. A man, aged 56, dated the beginning of his illness from the time he had his chest rather severely squeezed fifteen months previously. He had suffered from cough with some blood in the expectoration for the past eight months, and from severe pain in the lower part of the chest for five months, at which time he noticed that his finger ends began to enlarge. On admission, some dullness and deficiency of breath sounds were noted at the right base behind. The chest was deformed, there being an antero-posterior as well as a lateral curvature of the spine in the dorsal region. Several times in the day the skin became the seat of a very transient eruption resembling urticaria. In the right elbow joint (which had some years previously been injured but had quite recovered) the movement became limited. The hands presented the characteristic deformity. The terminal phalanx of each digit was much enlarged, the bone being chiefly involved. The nail assumed the shape of a parrot's beak. The same changes were noted in the feet. The knee-joints were also enlarged and somewhat fixed when the patient was standing. The bones of the head and face were unaffected. Later the right chest had to be tapped several times, and ultimately the patient died. At the necropsy a considerable effusion was found in the right pleural cavity, the lung being collapsed, and the pleura adherent over the seventh and eighth dorsal vertebræ. The liver was pushed down. A puriform mass occupied the body of the seventh vertebra and adjacent part of the parenchyma of the lung. The left lung contained cretaceous tubercle in the apex but was otherwise healthy. The case differed from acromegaly in that the face and head were unaffected, and in the character of the change in the hands. The relation between the lesions was the following: (1) a chronic pleurisy secondary to the disease in the vertebra (this latter producing a pachymeningitis involving the sixth, seventh, and eighth nerves, and hence the pain) and (2) consecutive osteo-articular deformities.—*Brit. Med. Jour.*

ASSOCIATION OF TABES WITH SACCHARINE DIABETES.

By Guinon and Souques (*Archives de Neurologie*, 1891, January and March, 1892).—The following conclusions are drawn by these writers on this question of the relationship of tabes and diabetes:—

1. There exist cases of association of true tabes with undoubted saccharine diabetes.

2. This association of tabes with diabetes in one and the same individual as in one and the same family, is not a fortuitous coincidence. It is the consequence of the intimate bonds of relationship which unite the two great families, the arthritic and neuropathic in general, diabetes and ataxia in particular.

3. To establish the diagnosis of these cases of association, and to separate them from diabetic pseudo-tabes, and from tabetic glycosuria with which they may be confounded, it is necessary to proceed in the following manner:—In case of an undoubted diabetic presenting tabetiform nervous signs, if the antidiabetic treatment brings about an amendment of these nervous signs along with improvement in the diabetes, pseudo-tabes may be affirmed, but if the contrary happen the presumption is in favor of true tabes, and the existence of subsequent appearance of certain tabetic signs (inco-ordination, vesical and

ocular troubles) transforms this presumption into a certainty. In the case of an undoubted tabetic, on the other hand, whose urine contains sugar, if the glycosuria is accompanied by anæsthesia in the region of the trigeminal, by frequency of pulse, and laryngeal and respiratory crises, it is under the dependence of the progressive locomotor ataxia, but if these concomitant signs are wanting, the probabilities are strongly in favor of the diabetic origin of the glycosuria.

THE FUNCTIONAL IMPORTANCE OF THE COCHLEA.

Corradi (*Archiv. f. Ohrenheilkunde,* B. xxxiii., H. 1.) sums up his conclusions from an experimental study of this subject as follows: 1. That in the human labyrinth, other portions besides the cochlea exist where acoustic impressions can be received, is not as yet demonstrated. In guinea-pigs, after complete destruction of both cochleæ, total and permanent deafness is observed. 2. Partial injury to both corneæ does not necessarily lead to complete and permanent deafness; on the contrary, it sometimes occurs that, either immedialely after the operation or after a little time, the hearing power returns, owing to the remaining uninjured parts. In such cases temporary impairment of hearing must be attributed to shock, to loss of blood, or to the reactive inflammatory disturbance. The objection which may perhaps be raised that, because, after injury of both cochleæ, a certain degree of hearing may remain in many cases, other parts besides the cochlea should exist in thr labyrinth where sound impressions are perceived, C. considers unfounded, since in the first place, as his experiments show, all hearing is lost if, instead of partial, complete destruction of both cochleæ is caused; and secondly, because, in those cases where after injury hearing remains the degree is usually very variable. Were this due to other portions of the labyrinth and not to the uninjured remaining parts of cochleæ, it should exist not only in all cases of total or partial destruction, but its degree should always be the same. Thus it becomes easy to explain those cases where slight hearing has been observed after throwing off of the cochlea. 3. It is very probable that the perception of different tones, according to their pitch, takes place in different parts of the cochlea, and the deeper the tone the nearer to the apex is situated the part of Corti's organ by which it is perceived.

POST-PAROXYSMAL ALBUMINURIA IN EPILEPTICS.

Voisin and Peron (*Arch. de. Neur.*, May, 1892) infer from their researches that transient albuminuria follows the occurrence of a fit in about 50 per cent. of epileptics. To a certain extent the amount of albumin usually is augumented in proportion to the number of fits; it is greatest in those cases in which cyanosis and congestion of the face are most marked; and, as a rule, its maximum excretion takes place in the first two hours after the last fit. In the epileptic status the urine always becomes albuminous, consequently eclampsia and epilepsy cannot be differentiated by the presence or absence of albuminuria.—*Brit. Med. Jour.*

THE BLOOD-VESSELS OF NERVES

Quénu and Lejars (*Archives de Neurologie,* January, 1892) write that the principal characters of the arterial circulation of nerves are as follows:—

The superficial nerves are all accompanied in their entire length by an arteriole, which lies alongside, and prolongs itself by a series of archings. They thus form the principal guiding lines of the subcutaneous arterial system. Each nervous trunk receives its arteries from constant sources, and from this there result often physiological or morbid connections of great importance.

A nerve trunk never receives all its arteries from a single arterial trunk. All the conditions which, in the nerve-centres, prevent the direct and sudden afflux of blood, are to be found in the nerves.

The venous circulation presents the following characters:—The veins of superficial nerves all empty themselves into the deep veins: when they communicate with the superficial veins it is only by an anastamosis of small size, the deeper communication being always present. The veins of nerves forming part of an arterio-venous group empty themselves sometimes into a large neighboring vein, sometimes into the network of the vaso-vasorum which surround an artery, but mostly into the muscular veins.

PERIODS OF INFECTIOUSNESS.

Dr. Arthur Ransome, Owen's College, Manchester, sought to investigate the period of infectiousness of some of the infectious diseases by means of a circular letter sent to the English physicians. The results arrived at are that measles is infectious before the appearance of the eruption (in one case four days before.) The period of communicability extends to thirty-one days after the receipt of the infection. In four cases of scarlet fever the disease was communicated from twelve to twenty-four hours before the appearance of the rash, and in two cases it was communicated six weeks after the cessation of the disease. Mumps was shown to be infectious two weeks after the cessation of the fever, or three weeks altogether. Diphtheria is infectious from the receipt of the contagion until complete recovery, in ordinary cases about thirty-three days. The milder forms of small-pox are infectious five weeks; in the severe forms eight weeks.—*Zeit. f. Schulgesundheitspflege.*

SEPTICÆMIA SIMULATING TYPHOID.

A. Bruschettini (*Rif. Med.*, February 11th, 1892), during an extensive epidemic of typhoid fever, sought to isolate the B. typhosus from the splenic blood of a large number of patients. The blood was obtained by means of a perfectly sterile syringe, the puncture being made with strict antiseptic precautions; it was always taken either during the period of rising temperature or at the height of the disease, never during the period of defervescence. The blood thus obtained was mixed with an equal quantity of sterile bouillon, and placed in the incubator at 37° C. for twenty-four hours, after which it was examined. In eight cases the B. typhosus was found, six times in pure culture, twice accompanied by a streptococcus, but never with a staphyloccus. In seven other cases pure cultures were obtained of a small staphyloccus, which could be stained well by Gram's method. These proved in fact, to be staphylococcus pyogenes albus. In every case the diagnosis of typhoid had been made by the physician in charge from the clinical signs. There were, at first, moderate pyrexia, intestinal pains, headache; next, the spleen increased in volume. The fever was of an irregularly remittent type, seldom exceeding 40° C. There was generally constipation, never diarrhœa. The disease lasted from fifteen to twenty days, without the appearance of any signs of nervous depression which are common in typhoid. Taking the slight difference in clinical symptoms together with the results of bacteriological examination, which revealed the S. pyogenes albus even in the circulating blood, the author feels justified in regarding the above as cases of general infection with the S. pyogenes aureus, the microbe appearing to be present in a somewhat attenuated form. —*Brit. Med. Jour.*

SURGERY.

A NEW METHOD OF TENOTOMY.

The following are the steps of an operation which was performed in case of post-hemiplegic contracture of the flexors of the fingers, by W. W. Keen, of Philadelphia. An incision was made, beginning just above the pisiform bone, and extending three inches obliquely upwards, its upper end being over the tendon of the flexor carpi radialis. All the flexor tendons having been exposed, each tendon was first split along the middle for an extent of one inch and a quarter, and then, at the two ends of this incision, section of the opposite halves of the tendons was made; that is to say, the radial half of the tendon was divided at one end of the vertical slit, and the ulnar half at the other end. The long, loose ends of the divided tendon were then made to glide on each other in a vertical direction over a distance of about half an inch, and sewn together by two transverse sutures. The tendon was thus lengthened to the extent of three-quarters of an inch.—*Medical Age.*

OSSEOUS NEW-GROWTH IN THE MEMBRANA TYMPANI.

Dr. Haberman also found an osseous new-formation in the membrana tympani, in a woman thirty years old, who had died of phthisis. The left organ of hearing being examined it was found that the membrana tympani contained a large perforation, on the anterior edge of which there was a calcareous deposit 2-3 mm. thick and 4 mm. high. The end of the hammer-handle projected into the perforation, and the

tendon of the tensor tympani was bound to the anterior tympanic wall by fibrous tissue. Microscopic investigation of the middle ear showed a thickened mucous membrane, especially at the niches where the inner passes into the lower wall. In the membrana tympani at several points were found calcareous deposits, cartilage-cells, and, at one point, *true bone-cells,* with numerous delicate offshoots into the surrounding calcified tissue. No haversian canals and lamellæ were found.—*Amer. Jour. Med. Sci.*

THE TREATMENT OF ANCIENT LUXATION.

Thiery (*Gaz. des Hôpitaux, 1891,* No. 136) suggests that the expression "ancient" be replaced by "irreducible" luxation. In considering the measures to be employed in this class of cases he reaches the following conclusion: First. Under anæsthesia trial of manual reposition is to be made. Second. Forcible measures may be tried if manipulation fails. Third. Tenotomy is useless in this class of cases. Fourth. Arthrotomy is, as a rule, the operation of choice, particularly in luxations of the shoulder. Fifth. Resection, especially in combination with the artificial formation of acetabulum, is to be preferred for the hip-joint; in the shoulder-joint it may likewise be useful, but should be preceded by a trial of arthrotomy. Sixth. Osteotomy and osteoclasis have succeeded in a few cases of a desperate character; they are rarely indicated however. Seventh. At the present time there can be no justification for amputation, which was in former times resorted to upon occasion.

PERINEPHRITIC ABSCESS SECONDARY TO PLEURO-PULMONARY AFFECTIONS.

Tuffier (*Sem. Méd.*, May 11th, 1892) reports the following case. A woman, aged 34, suffering from broncho-pneumonia, with pleural effusion, suddenly developed symptoms of perinephritic abscess. A free incision in the loin gave issue to a considerable quantity of pus. On bacteriological examination this was found to contain only pneumococci. The the patient recovered well from the operation, only a small fistual being left in the loin, but she was suddenly seized with pneumonia of the side opposite to that first attacked, and died in a few days. On *post-mortem* examination it was found that the fat around the kidneys communicated freely with that around the pleura through a tiny track—a "costo-lumbar hiatus"—which exists in the normal state, and is constituted by the absence of some fibers of the diaphragm at one of its points of insertion into the aponeurosis of the quadratus lumborum. It was through this track, which is abundantly supplied with blood-vessels and lymphatics, that the infection spread from the thorax to the parts about the kidney.—*Brit. Med. Jour.*

CASE OF CONGENITAL OBLITERATION OF THE SMALL INTESTINE.

Thompson. (*Edinburgh Medical Journal*, March, 1892,) reports a case of a male child, who died on the eleventh day after birth, and who had had symptoms of intestinal obstruction, was found to be the subject of a remarkable anomaly. Just at the commencement of the jejunum the bowel terminated in a blind dilated end, and the mesentery ceased at the same point. A short distance beyond was an isolated loop of gut, blind at both ends, and two and a half inches beyond this the intestine became previous again.

A narrow fibrous band, which was probably due to old peritonitic adhesions, seemed to be the cause of the obliteration of the gut. When the mother of the child was two months pregnant, she had an ovarian cyst removed, but recovered without complications. Whether the fœtus suffered from peritonitis because the mother underwent ovariotomy, or whether the occurrence of peritonitis under such circumstances is a mere coincidence, is a matter for speculation. The original account of this case and the drawing which accompanies it are worth the reader's attention.

CATHETERISM OF THE BILIARY PASSAGES.

In the February number of the *Revue de Chirurgie*, Dr. Terrier and Dr. Dally conclude an exhaustive article on catheterism of the biliary ducts in conjunction with cholecystotomy or in the treatment

of the case after the performance of that operation. They think that this procedure is easier in pathological cases, especially those in which the passages are dilated in consequence of retention of bile, than it would be in experimental trials on the cadaver. In many cases it would be found difficult on account of curvatures of the cystic duct, or of the persistence of the valves, or of the cystic duct opening on the lateral wall of the gall-bladder. In some cases the difficulties will be insurmountable, while in others the exploration will be found quite easy. To formulate rules for this sort of catheterism is impossible; one can only be guided by one's anatomical knowledge. Forced catheterism, even with the finger placed under the liver in the abdomen, seems to be dangerous under all circumstances. Our information is as yet not sufficient to enable us to appreciate the value of *cathétérisme à demeure.* The instruments employed should always be sterilized.—*N. Y. Med. Jour.*

WHAT CAN WE EXPECT FROM THE SURGICAL TREATMENT OF EPILEPSY.

Dr. B. Sachs has a valuable communication in the *New York Med. Jour.* of Feb. 20, and the following are some of his conclusions: "1. In a given case of traumatic or organic lesion operate as early as possible to prevent the development of secondary sclerosis. 2. If you have not operated at the outset, the onset of epilepsy is a warning that secondary sclerosis has been established; by operation at this time you may avoid an increase of the trouble. 3. Excision of the diseased area is the only rational operation. If all other centres are not in an irritable condition the operation may be thoroughly successful. If we cannot easily cure epilepsy, we may improve the patient's condition by diminishing the number of attacks. Traumatic cases call for immediate surgical interference. As trepanation is not a very dangerous operation it would be better to do this than to have the slightest doubt. He thinks, under favorable conditions, and by the methods described in his article, the surgeon may be able to cure a few cases of epilepsy. He will be able to improve many, but surgeons and neurologists should in the future make an earnest effort to *prevent* epilepsy.

SPONTANEOUS CURE OF A SEVERE ABDOMINAL WOUND.

"Dr. Schildt mentions in *Duodecim,* a Finnish medical journal, a case, showing that, occasionally at least, a large wound into a serous cavity which looks hopeless enough may heal without treatment. He was called some years ago to a poor man supported by charity, who, in consequence of inflammation of the groin, had a large gaping wound of the abdominal wall, through which some six inches of the small intestine protruded, all covered with blood, added to which there was a discharge of fœtid matter. The man was sent to the hospital, where, however, he could not be admitted, as all the beds were full. He was therefore taken home again, and received no treatment whatever. Nevertheless, Dr. Schildt a short time ago happened to see him alive and well, the wound having healed spontaneously."—*Lancet.*

CYST OF THE MIDDLE TURBINATED BONE.

Charles H. Knight writes in the *Brooklyn Med. and Surg. Journal*: This condition affects the special sense of smell, the drainage of upper nasal fossæ, and may also be the cause of various reflex phenomena. The cysts are rarely large enough to interfere with the respiratory functions of the nose. The subjective symptoms are impairment of smell, persistent headache, neuralgia of fifth nerves, and some obstruction. On inspection the mucous membrane may appear atrophied, the tumor is firm and unyielding to touch, a considerable discharge of mucous into post-nares generally present. A case has been reported by Schaffer of cystic involvement of inferior turbinated, and one by Bayer of the superior turbinated; none have come under the author's observation.

This condition is frequently associated with myxomatous degeneration. Females are more often affected than males, and most of the patients have been past middle life. No case occuring during childhood has been reported.

This condition must be differentiated from osteoma, myxoma and mucocele of the ethmoid cells.

A cross-section of a cyst presents the following microscopic appearances: On outer surface a layer of pavement epithelium, beneath a strata of connective tissue,

moderately vascular. Under this a layer of bone of varying thickness, then a lining of loose connective tissue, and covering the inside of the cyst a row of ciliated epithelium. The lesion causing this condition is probably an osteophytic periostitis, followed by a hypertrophic rhinitis. The bone of middle turbinate curls upon itself until it reaches and adheres to its own base. The external layer of mucous membrane may hypertrophy or atrophy from pressure. The glands on internal surface secrete until cyst cavity is filled to distension, when the atrophic process is initiated. The cyst contents may become purulent. The treatment is entirely surgical, consisting of removal of mass by means of cold wire snare. In case it is impossible to ensnare the growth it may be removed by means of the cutting forceps and scissors. To examine cyst contents, hypodermic puncture is necessary, as the cyst walls are always broken during the removal of the bone. The hæmorrhage during the operation is generally insignificant.

The indications of surgical interference are as follows:

1. Obstruction of nasal respiration.
2. Prevention of nasal drainage.
3. Reflex neuroses.
4. Anosmia.
5. Impaired quality of voice.

RADICAL TREATMENT OF DACRYOCYSTITIS.

Guaita (*Centralbl. für prakt. Augenheilk.*, No. 1) recommends curetting the lachrymal canal and the introduction of a decalcified bone tube into the duct previously divided, for the relief of dacryocystitis. The tubes are prepared from the bones of the hind-legs of large turtles; the bones are treated with dilute hydrochloric acid, and the medullary cavity cleansed; the tubes are kept in absolute alcohol and a solution of mercuric chloride, 1: 500. They should average about an inch in length, and from a tenth to an eighth of an inch in diameter. After the lachrymal canal is opened and curetted, it is cleansed with gauze saturated with a solution of mercuric chloride, 1: 2000; the tube is introduced, and the wound is closed with one or two sutures. A compress wet with a cold solution of mercuric chloride is afterward applied. Unless severe inflammatory symptoms be present, a cure can be expected in from four to six days.—*Wiener medizin. Presse*, 1892, No 15, p. 594.—*News.*

CATHETERIZATION OF THE BILIARY DUCTS.

After a lengthy discussion of the normal anatomical structure and the pathological changes produced in the biliary ducts and their relations to catheterism, Terrier and Dally (*Revue de Chirurg.*, 12e année, No. 2) come to the following conclusions: 1. In general the catheterization is easier under pathological conditions, especially when the ducts are dilated by a stoppage in the valves or at the distal end of the cystic canal. 2. Nevertheless, in many cases, owing to the curvatures in the canal, the persistence of the valves or the opening of the duct upon the lateral wall of the sac, the catheterism is difficult. 3. Often the difficulty is insurmountable, often there is none. 4. Rules for the passage of the catheter are impossible, owing to the variations in the anatomical relations. The only way is to attempt the catheterism with a clear idea of the normal relations for a guide. 5. Forced catheterism, even with a finger externally to direct the instrument, is difficult and in all cases dangerous. 6. The treatment is not well enough understood as yet for its value to be appreciated. 7. The instruments to be used are olive-pointed bougies and Bénique's catheters, with or without stylets. Liver catheters are of rare use. 8. In all these operations strict antisepsis must be observed.—*Amer. Jour. Med. Sci.*

THE UNION OF DIVIDED TENDONS

Busse (*Deut. Zeit. f. Klinische d'Orthopédie*, tome v., 6 année, No. 5) finds, as the result of repeated experiments, that in the cases of tenotomy, immediate complete union is never obtained. Even when the ends of the divided tendons are sutured, exact apposition never persists. An extravasation of blood filling up the space between the divided ends of the tendon is utterly useless; in fact, it retards cicatrization, which does not begin until the clot is absorbed. Union is very much more rapid when the wound is

rendered bloodless, and when no clot is present. The peritendinous and interfascicular tissues furnish by cellular proliferation the splint which unites the divided tendon. This splint requires many months to become identical in structure with the tendon.—*Therapeutic Gazette.*

OBSTETRICS.

ABUSE OF ERGOT IN THE FIRST STAGE OF LABOR.

Chaleix (*Nouv. Arch. d'Obstèt, et de Gynèc.*, April, 1892, Supplement, page 154) relates a case where a midwife gave ergot freely in the first stage of labor. The cervix was so much affected that it felt as though made of ivory. As the cervix was the part most affected, Barnes's bag was used, the instrument known by the name of Champetier de Ribes, which distends the whole uterine cavity, not being indicated. Chaleix succeeded in turning and delivering the child.—*Brit. Med. Jour.*

STERILITY IN THE MARRIED.

Seeligmann (*Berliner klinische Wochenschrift*, *Annals of Gynæcology*, May, 1892), is most favorably impressed with the effects of massage and electricity in many cases of sterility due to faulty conditions in the female generative organs. These measures of treatment are especially beneficial in cases of chronic disease of the appendages, rising after parturition, with resulting sterility. The size of the ovary has been known to diminish, its functional activity to return, and a distorted and adherent tube has become loosened, and straightened and its canal patulous. In applying galvanism to the uterine cavity, the author always uses the negative intra-uterine electrode, as it possesses only a weak cauterizing action and produces an alkaline reaction of the uterine secretion, which is favorable to the prolonged life and activity of the spermatozoa.—*Univ. Med. Mag.*

CÆSAREAN SECTION IN A CASE OF ABNORMALLY LONG CERVIX.

Aalsmeer, of Surinam (*Centralbl. f. Gynäk.*, No. 1, 1892), is the first who has ever performed Cæsarean section in Surinam. The patient was a negress, aged 22. Her first labor was finished by perforation. She was admitted into hospital during her second labor, after the pains had continued for a whole day. It was found that the cervix was 6 ⅔ inches long, the vaginal portion alone measuring 3½ inches. The tissues were soft, and the canal only admitted the finger with difficulty. The pelvis was flat and uniformly contracted; the conjugata inclinata measured 3 ⅗ inches. Conservative Cæsarean section was performed. Hæmorrhage was trifling; the temporary ligature was not needed. The patient recovered, and the child survived.—*Brit. Med. Jour.*

PEDIATRICS.

HOW TO RAISE SYPHILITIC INFANTS.

Dr. Nicolle (*L'Union Médicale*, February 2, 1892), in his work on the nursery of the hospital of the *Infants Assistes* recommends that an infant with hereditary syphilis should

1. Be nursed by its mother, or if this is not possible by a nurse who is syphilitic.

2. If neither mother nor nurse can be secured that it is well to let the infant take the milk direct from the teat of an ass, but only for the first few months.

3. This must be replaced later on by cow's milk. The arrest of development in the infant indicates the time when this change should be made.

4. In the impossibility of securing ass's milk we must resort to diluted cow's milk, sweetened and boiled. It is always a defective alimentation.

5. Whatever food is adopted it must be continued much longer than in the case of a healthy child. It seems to the author there would be an advantage in giving goat's milk taken from the udder of the animal from the age of six or eight months up to sixteen months longer.

6. Treatment by Van Swieten's fluid from fifteen to fifty drops per day according to the age, strength intensity of the manifestations, etc., is advised. Occasionally the dose may be increased but should never exceed five grains.

7. Most minute attention should be paid to hygienic measures, baths, change of air, etc.

SALICYLATE OF BISMUTH IN INFANTILE DIARRHŒAS.

Mikhnevitch (*Med. Obozreniĕ*, No. 6, 1892), having tried the salicylate of bismuth in 50 cases of diarrhœa in infants under two years of age, reports that, of the number, only 2 died (a boy of 8 months with pelvic suppuration consecutive to intractable colitis; and an infant of 5 months, born prematurely and exceedingly sickly since its birth). The following formula is recommended: ℞ bismuthi salicylici, gr. xxiv; gummi arabici, ℥j; sacch. albi, ℥jss; terendo adde aq. dest., ℥ij; fiat lac, tum adde aq. dest, ℥iv. M. D. S. The bottle to be kept in cold water or ice, and to be shaken well before use. One or two teaspoonfuls to be given from three to six times daily. Each teaspoonful of the mixture contains about ½ grain of the salicylate, which constitutes a normal dose (three or four times daily) for an infant of from 6 to 8 months old. In cases of offensive diarrhœa the administration should be preceded by a dose of castor oil. The bismuth salt should be given regularly until the diarrhœa has completely subsided. It must be kept in mind, however, that in large doses the remedy is apt to induce perspiration with consecutive weakness (especially in exhausted children), hence a corresponding reduction of the dose may become necessary. In acute cases the remedy is useless, but in all of a week's standing or longer its effects are said to be excellent.—*Brit. Med. Jour.*

HYGIENE.

IMMUNITY AND THE TREATMENT OF RABIES BY THE BLOOD SERUM OF PROTECTED ANIMALS.

Professor Guido Tizzoni and Dr. R. Schwarz, in a preliminary communication (*Riforma Med.*, August 22nd, 1891) give an outline of the results obtained by them during the past year in a series of experiments undertaken for the purpose of determining the following questions: (1) What is the active principle which confers immunity on vaccinated animals against rabies, and can the serum of these animals transmit immunity to others not so vaccinated? (2) Given that the serum can transmit immunity, what is the nature of the substance possessing this power, and can it be obtained and preserved in solid form? (3) Can the serum of vaccinated animals, besides conferring immunity cure animals already infected if given during the incubation period? They made most of their experiments on rabbits, which are much more easily rendered rabid than other animals. For vaccinating these and also the dogs used, they employed the method of Pasteur and Protopopoff. The vaccine employed was a virus obtained from a rabid dog, and passed once through a rabbit. Their results may be summed up as follows: (1) The serum of vaccinated rabbits, even after a brief contact *in vitro*, destroys the activity of a virus of rabies, even if this has been first strengthened by two or three passages through rabbits. This is proved by making a pulp of the medulla of a rabid animal, mixing it with the serum to be tested, and keeping the mixture in a cool place for a few hours, using it afterwards for subdural inoculations. (2) This serum retains its antirabic power for several days if kept at a low temperature. Injected into the jugular of unprotected animals (about 5c.c.) it confers immunity not only against infection by subcutaneous inoculation, but also against that by intravenous or subdural injection. (3) The serum of vaccinated dogs has a much less powerful action. It will not *in vitro* annul the action of a virus reinforced beyond the first passage through a rabbit; injections also of 4 c. c. and even double that quantity are not constantly sufficient to secure immunity against infection by a "direct" virus introduced either into the sciatic or under the dura mater. (4) The serum of rabbits rendered immune by serum from vaccinated animals does not confer immunity on a third generation of rabbits, even against intrasciatic injections of a weak virus. It is also without effect on a virus exposed to its action *invitro*. The immunity obtained by the injections of serum appears therefore to be less than that conferred by vaccination. (5) Not only the degree but also the duration of the immunity conferred by the serum of vaccinated rabbits is less than that obtained by direct vaccination. Serum-protected animals are found to be again susceptible after about six weeks, while vaccinated animals are protected even after ten weeks. (6) The active substance contained in the serum appears absolutely non-dialysable. (7) This substance is precipitated by alcohol, but in the precipitation it loses some of

its activity. The same result takes place if one precipitates by alcohol the globulin obtained by saturation with magnesium sulphate from the serum of vaccinated animals. (8) Glycerine extracts the active principle from the alcoholic precipitate. (9) If the globulin be separated from the serum by means of magnesium sulphate collected on a filter, dialysed free from salts, and redissolved in salt solution, it will be fonnd that this solution has the power of destroying rabic virus, whereas the filtrate has not. This is similar to what happens in the case of tetanus, and shows that the active principle is either a globulin or is precipitated along with a globulin. (10) This substance is not identical with that which confers immunity against the products of the tetanus bacillus. (11) With regard to the cure of rabies by means of the serum from vaccinated animals, the authors have one decisive experiment. In this the injection of 5c. c. of serum from a highly-vaccinated rabbit into the jugular saved another rabbit inoculated twenty-five hours before in the sciatic with a mild virus. (12) The serum from vaccinated dogs exerts no such favorable action. This is the first time that it has been found possible to save a rabbit after injection with the virus of rabies. Vaccination has always failed in the case of this animal. The results stand in perfect harmony with those already known with regard to tetanus, and would seem to show that immunity against rabies is not a special form, differing from that against other infections.—*Brit. Med. Jour.*

THE EMPLOYMENT OF UNBURNT LIME FOR PURIFYING WATER.

Professor Szpilman, of Lvow, successfully employed unburnt lime for removing from the water *crenothrix* and *cladothrix* which, as it is known, develop in springs, wells, basins, water pipes, etc. These micro-organisms, forming greenish-brown tufts, which swim on the surface of the water or collect on the bottom, render it unfit for drinking purposes, although they are in themselves harmless to man. Sometimes they clog or stop up the water-pipes. The author convinced himself that unburnt lime, in the quantity of 0.5 to 2 kilos of powder to 100 litres of water, or 20 to 40 per cent. of lime-water, entirely destroys the micro-organisms in twenty-four hours. In Lvow, two springs were purified by this means.—*Zdrowie*, August, 1891.

MEDICAL CHEMISTRY.

NATURE OF SOLUTION.

Professor Wanklyn has published several papers bearing on the subject of solution, and giving the conclusions derived from experiments made by him and his colleagues during a number of years. He announces a law which is applicable to gases as well as liquids. It is to the effect that heterogeneity is without influence on volume; that is, that the volume of a mixture is equal to the sum of the volumes of its constituents separately measured. This, of course, only applies in the absence of chemical combination, and it may be argued that when this law does not hold good the case is one of chemical rather than simple solution.

In the instance of a mixture of alcohol and water, there is a considerable contraction in volume, and much heat is evolved. This indicates chemical union, and this view is further strengthened by the fact that it is impossible, by distillation alone, to remove from such a mixture the last eight per cent. of water.

In the case of sugar and water the results are different. Solutions of sugar occupy almost exactly the same volume as the sugar and water would if measured separately. This was found to be strictly true with solutions up to 105 grammes of sugar in the litre. This showed the specific gravity of fluid sugar to be 1.635. In solutions stronger than this the density of the sugar is a little lower, viz., gravity of solid sugar. The fact is that in passing from the liquid to the solid state there is a a slight expansion, about one-fiftieth. In thick, viscid syrup there is present the slightly expanded sugar, but, in the more fluid solutions the fluid sugar is found, having the specific gravity above indicated.

Saline solutions in some respects resemble those of sugar, but are dissimilar as to contraction, the latter being very considerable. The view taken of such is "that they are mixtures of fluid hydrates with water, and that the fluid hydrate simply diffuses into the water, or mixes with the water, without changes of volume of any kind.—*Can. Pharm. Jour.*

THE CLINICAL EXAMINATION OF BREAST-MILK.

At the recent meeting of the American Pediatric Society, Holt detailed a simple method of examining breast-milk for clinical purposes. There are two ingredients in milk that are nearly constant in their proportions: milk-sugar and the inorganic salts. Two others vary widely: fat and the proteids. From a knowledge of the specific gravity and the amount of fat, it thus becomes possible to form an approximate idea respecting the proteids. There were found to be in breast-milk a pretty constant relation between the amount of cream rising upon a given specimen in twenty-four hours and the amount of fat. The ratio was approximately two to one.

An apparatus was shown for taking the specific gravity of a small quantity of milk, and cylindrical tubes graduated in one hundred parts, from which the amount of cream could be read off at the end of twenty-four hours. The clinical significance of these data was shown by the following table, drawn from observations upon upward of three hundred specimens of breast-milk from eighty different women.

Attention was called to the fact that an estimate of the quantity must be made by other means. The specimen for examination should be taken from the middle of the nursing.

HUMAN MILK.

	Specific gravity 70° F.	Cream—24 hours.	Proteids.
Normal average.	1.031	8 per cent.	Normal.
Healthy variations	1.023–1.029	9 per ct. to 12 per ct.	Normal (rich milk).
Healthy variations	1.032–1.033	5 per ct. to 6 per ct.	Normal (fair milk).
Unhealthy variations	Below 1.028.	High (above 10 per ct.)	Normal or slightly below.
Unhealthy variations	" "	Normal (5 per ct. to 10 per ct.)	Low.
Unhealthy variations	" "	Low (below 5 per ct.)	Very low (very poor milk.)
Unhealthy variations	Above 1.033	High	Very high (very rich milk).
Unhealthy variations	" "	Normal	High.
Unhealthy variations	" "	Low	Normal (or nearly so).

NEWS AND MISCELLANY.

ARTIFICIAL CHOREA.

M. Chares Richet, the well-known French physiologist, has succeeded in inducing chorea in a dog by injecting the blood of an animal suffering from this motory disturbance. The injections were followed by general atrophy, by trophic lesions of the skin in various parts of the body, and by rhythmical convulsions of the limbs, continuing during sleep and yielding only to large doses of chloral. It cannot truthfully be said that the experiment adds much to our knowledge of the ætiology or even the pathology of this affection. Apart from the fact that a single experiment proves nothing, there are too many alternative explanations of the phenomena observed.—*Med. Press.*

THE ABUSE OF COCAINE.

Mr. Conolly Norman, of Dublin, contributes a paper on this subject to the last number of the *Journal of Mental Science.* He says that undoubtedly much harm has resulted from a recent tendency to use cocaine to break off the morphia habit, and from the mistaken notion that this drug can be employed safely and advantageously for this purpose. Cocaine, the author remarks, is more insidious than morphia; it fastens upon its victim more readily, and its hold is at least as tight. The special dangers of cocaine are said to be three: (1) That it is treacherous; (2) that it early produces breakdown, both in the moral and intellectual spheres; and (3) that it is intensely toxic, bringing about destructive tissue change after a comparatively short period of abuse. In the last respect it differs from alcohol and morphia, which may be long indulged in, in considerable quantities, without giving rise to serious structural change. In chronic cocaine poisoning, on the other hand, marasmus appears early and develops with extreme rapidity, convulsions are not uncommon, and chronic poisoning in animals produces, as Zanchevski has shown, degeneration in the cells of the medulla and spinal cord, and also in the nerve cells of the heart ganglia, and in the liver cells. The great danger of cocaine lies in the fact that it is the most agreeable and alluring of all narcotics. It causes no mental confusion, only a little more talkativeness than usual, the narcotic effects are not overwhelming, and there is no headache or nausea, and the pleasant effects are produced with a comparatively small dose. But toxic symptoms are rapidly developed, and within three months of the commence-

ment of the habit there may be marked indications of degeneration, loss of memory, hallucinations, and suspicions. Dr. Norman has seen three cases of abuse of cocaine. In one the drug was given as a substitute for morphia, in the second it was first given for a painful affection of ths nose, and in the third the patient was in search of a new stimulant. The symptoms in the first case were hallucinations, sexual excitement, and loss of sense of the passage of time. The second patient was elderly, and after six months' use of cocaine, he fell into a state of mental hebetude, with loss of memory and broken, irregular sleep. He was also tormented with sexual excitement. In the third case, a young man, the memory was failing, he was furtive and shifty in manner, and could not speak the truth. He also had visual hallucinations, and at first sexual desire was increased, but latterly diminished. These cases seem to furnish fair examples of the usual condition produced—a condition sufficiently serious to put medical men on their guard against prescribing too freely a drug so insidious and so dangerous.—*Lancet.*

A STRANGE MEDICO-LEGAL CASE.

Dr. F. Semeleder writes in the *Medical Record*: One evening in May, 1891, a woman, belonging to the middle class, presented herself at a police station of this city, crying and in great distress, asking for medical assistance, because her husband was very sick and had probably poisoned himself. The employee and surgeon went to the patient's house, found him almost dying; signs of disorder in the house and room, as is natural in case of such an accident. On the table there was a small vial labelled morphia. The sick man was taken to the municipal hospital of San Pablo, where he died the next morning, without having once recovered consciousness even for a minute. The widow and family were extremely anxious to have the corpse delivered to them to take home. They wished to wash and dress it and have a funeral. However, as there were some strange features about the case, they were denied their petition, and a post-mortem ordered, which furnished the following curious data:

No external lesion was found. The nostrils and mouth showed signs of a bloody discharge and the nasal cavity was full of bloody cotton. After opening the skull no signs of congestion of the brain were noticed; after taking out the brain, at the base of the anterior lobes a small portion was reduced to a pulp. On the base of the skull the cribriform plate of ethmoid bone showed fractures communicating with the nasal cavity and corresponding to the brain lesions before mentioned. These fractures were probably caused by some pointed instrument (afterward it was known to have been an iron hook) introduced with great force and turned around in various directions. A little further back, and in the right fossa of the cerebellum, between the dura mater and bone, there was an extravasation of coagulated blood: after removing this blood a fracture was discovered at the base of the skull, which parted from the occipital foramen and extended into the mentioned fossa.

The mouth, nasal, and pharyngeal cavities were full of blood-clots; above the soft palate, in the fundus of the pharnyx, a small wound made with a pointed instrument and only interesting the mucous membrane. The sixth, seventh, eighth and ninth ribs on both sides were fractured, near the insertion of the cartilages and on the pleura were corresponding ecchymoses, like those occurring in cases of sudden death.

It is evident that the lesion, partial destruction of the brain, was the cause of death in this case. The murderer, whoever it was, must be possessed of certain anatomical knowledge and of a great amount of shrewdness. No further particulars are known, as the case has not yet been brought to a trial.

PRIZE FOR ESSAY ON TUBERCULOSIS.

The Congress for the Study of Tuberculosis announces a prize of three thousand francs for the best essay on "The Means of Diagnosticating Latent Tuberculosis before its appearance or after its Cure." The essay must be written in French and sent to Dr. L. H. Petit, 76 Rue de Seine, Paris, before April 1, 1893. Each memoir should be accompanied with a sealed envelope containing the author's name and address.

THE
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Clinical Report.

PRESBYTERIAN HOSPITAL, TENG CHON FU, CHINA.

DR. ROBERT COLTMAN, JR.

Case 1. Man, age 30, soldier. Says he has had a pain in his left leg running from his toes up into the groin. Says also he has several lumps in the groin which antedate the pain and he believes causes it. On removing his trousers we find a red line running from several indurated glands in the groin to an ulcer situated between the second and third toes. There is an offensive secretion arising from this ulcer.

His penis is swollen and shows signs of recent inflammation and he acknowledges having had a hard chancre which has caused this infiltration but he says all active inflammation ceased six months ago. The ulcer between the toes appears to be a condyloma though this is not a frequent situation for it. We have then a phlebitis caused by poison absorbed at the site of a condyloma between the toes. I do not attribute the phlebitis to the condylomatous ulcer but as the man is exceedingly dirty and wears no stockings, I think the irritation of the bare shoes or filth has caused the inflammation.

I shall have him wash his feet and apply some benzoated oxide of zinc ointment between the toes and give him internally a half ounce of Epsom's salt to be followed after eating by 20 drops tinct. ferri chlor. for several days. The course of the vein we will paint with tinct. iodine twice daily. Specific treatment we will defer until after this local disease has yielded to our treatment.

Case. 2.—One glance at this man tells you his disease. It is leprosy. He is but 30 years of age and yet looks fifty. He says he has had the disease about seven years and that the first he noticed of it was a numbness, followed by entire loss of sensation in a few months, in the left foot. His father is living and 63 years old and healthy. Mother also alive and well, age 56. Only has one sister and she is healthy. In a village a mile away are two brothers who are lepers, but he has had no communication with them. He has lost his eyebrows and most of his hair which with the copper-colored hypertrophic ridges in the forehead and cheeks disfigure him greatly and make him look much older than he is. What is of more moment to him, however, than disfiguraation is the loss of several joints from the fingers of both hands and the contraction of the flexor tendons so that he with difficulty extends his stumps of fingers to grasp anything. You notice he can scarcely place his phial on the counter. His toes have also lost some joints but the tendons have not contracted. Sensation abolished to the knee, deficient from there to the abdomen but good over abdomen and chest. Deficient but not abolished on face, deficient also in both arms, particularly bad in left. He has no open ulcers at present so we will only treat the general condition. We will repeat what he has been taking and what he says makes him feel better, though as he has no pain whatever I think is imagination, namely, twenty drop doses of syr. ferri iod., three times daily. This man owns to having had syphilis at 23 or just about the time of the first development of numbness. Now, although I don't believe all lepers syphilitic, I do believe that syphilis prepares the body for the reception of the leprous germ and other things being equal I believe a non-syphilitic person able to re-

sist contagion much better than a subject of syphilis.

Case 3.—This little girl is eight years old and her mother says she is constantly crying with pain in the stomach. There is no set time for the pain to come on but eating food relieves it usually for some time. Appetite is capricious and nausea frequent. She vomited up a long round worm last night which the mother declares was a foot long. Her tongue is a typical worm tongue being coated with a thin white fur through which especially at the sides the red papillæ arrange themselves in rows more or less even. We shall give her three grains each of santonine and calomel rubbed up with ten grains of sugar of milk and divided into three powders. One powder to be taken each night and morning on an empty stomach and after the three have been taken, followed with a dessertspoonful of castor oil. We can safely expect this to effectually remove all symptoms.

Case 4.—This man, age forty, says he is always filled up with wind. Worse immediately after eating but even when hungry he feels full.

On palpation we find no evidence of retained fæces but evidently he has considerable wind in the bowels. His diet is largely cabbage and bread with raw onions or radishes. He suffers considerable pain at times but has never vomited. Is not at all sensitive on pressure. Is chronically constipated. A change of diet would be a good thing but that to any marked degree is impossible owing to his poverty. We will tell him however to have his cabbage well cooked and to eat his bread when a day old. There is evident lack of biliary secretion and perhaps inactivity of all the glands concerned in the process of digestion. I shall give him the following pill to be taken just before meals:

℞ Pulv. podophyllin.....gr. j.
Acid carbolic.....gr. viij.
Gum assafœtida.....gr. xlviii.
Ext. taraxicum.....q. s. ft. pill xvi.

This combination I usually find successful in this class of cases but occasionally arsenic in Fowler's solution gtt ij before meals will be better.

Case 5.—This boy, eighteen years old, comes back to us after an absence of two years. Two years ago he was in the hospital with pleurisy of the left side, and after the effusion subsided he was left with an atelectasis of the left lung so that his right lung alone aerated the blood. I kept him under observation at that time for over two months and although he had no fever after the effusion subsided yet his pulse continued uniformly at 120 beats per minute. Then I sent him to his home in the country forbidding his attending school for a year. I have not seen him since. Now to-day what do we find to be his condition. He has grown some taller and much stouter than he was when I last saw him and his chest is not retracted to the degree it was then, though he has a decided stooping of the left shoulder.

On auscultation I find great improvement the upper two thirds of this formerly useless lung is now receiving and expelling air with each inspiration. The lower third is still flat on percussion, there is no vesicular murmur to be heard over it, and it is apparently glued up so tight that it will not expand any more. Nature has by pure air and exercise on a farm, given this boy a fairly useful lung, whereas if he had remained in the city and at school he would probably have gone into consumption. He now comes back to school, for which I am sorry. Boys in his condition who have the elementary education he has should remain in the country and by judicious reading acquire all the education necessary to an outdoor life. If cooped up with many others bad air will have its effect on him and his health will break down under it. As he has merely come to be examined we will report him as much better and advise his return to the country instead of going to school as he desires.

EXALGINE.

From a study of the analgesic properties of exalgine made by Dr. Dèsirè, at the Hôpital Lariboisière, the conclusion was drawn that, aside from any antithermic action, the product is an admirable specific against pain. It was employed in a great variety of apyretical affections with uniform success. The dose of twenty-five centigrammes, or about four grains, was found sufficient for most cases, but it can be pushed to double or treble this quantity, though as much as a grain is scarcely ever necessary. If medicine rarely cures, it should at least always console, and sometimes relieve, and with exalgine the author thinks great relief can often be given.

Communications.

QUALITATIVE TESTS FOR SUGAR IN THE URINE.*

By J. D. RIKER, B. S., M. D.,
PONTIAC, MICH.

It is known by those who have had considerble experience in testing the urine for sugar, that nearly every test is more or less unreliable. In view of this fact we have made a careful study of all the more important sugar tests, applying them to a large number of specimens of normal and abnormal urine and to standard sugar solutions, as well as to the isolated organic constituents of urine in health and disease in order to find if possible the substances that interfere with the more common tests and the means by which they may be avoided so that the presence or absence of sugar may be known beyond the question of a doubt. (For formulæ of the tests referred to in this paper, see the end of this article, also the formulæ for certain tests that have appeared from time to time in journals as reliable but which are in no way superior or even equal to some of the common tests herein reviewed.)

THE COPPER REDUCTION TESTS.

The copper sulphate solutions in general use are (1) Trommer's, (2) Fehling's, and (3) Pavy's. While we have many modifications of these, only the most important will be touched upon.

1. Trommer's Test. To two or three c. c. of urine in a test tube, add one or two c. c. of caustic soda or potash, then drop by drop a solution of cupric sulphate 1:10, until the precipitate formed appears to have dissolved completely; heat the upper portion of the mixture and if the urine contains sugar a yellowish red precipitate is formed in the heated layer (before reaching the boiling point.)

2. Fehling's Test. Pour Fehling's solution, to a depth of three fourths of an inch, in test tube; boil and add a few drops of the urine. In a few seconds the mixture will become suddenly yellow if the urine be diabetic.

3. Schmiedeberg's Solution is applied the same as Fehling's.

4. Pavy's Ammoniated Copper solution works nicely in making quantitative estimations of glucose in water solutions, but cannot be applied to urine with any satisfactory results, as shown by testing a large number of normal urines, every one of which gave reactions for sugar, the amount of urine used in each test not exceeding the amount of the test solution.

The precautions to be observed in the use of the copper reduction tests are as follows: In the application of Trommer's test to the urine, notice first that the disappearance of the blue color of the copper sulphate solution is no proof of the presence of sugar. The blue color is caused to disappear by the action of the alkali upon the organic matter present; not only must the blue color disappear but there must be a distinct precipitate of the sub-oxide of copper (4). Now this precipitate is to be recognized by its color, as on the addition of caustic soda or potash the phosphates will be thrown down as a dirty white precipitate, which is to be distingnished from the red or yellow sub-oxide of copper thrown down by sugar (4). Again, continued boiling will in fifty per cent. of normal urines reduce the copper sulphate. Sometimes the reaction fails unless the urine be diluted before testing. (Kulz). The power of a urine to dissolve the cupric oxide does not necessarily imply the presence of sugar, as ammoniacal or albuminous urines may do the same. (V. Jaksch.) In the application of Fehling's test and its modifications observe the following rules:

1. Boil your Fehling's solution to see that heat alone will not cause a reduction.

2. Never add more urine than you use of the reagent.

3. The Fehling should never be added to the boiling urine; but to the boiling Fehling add your urine drop by drop, five or six drops being sufficient in the majority of diabetic urines to completely reduce the copper.

4. Never boil longer than thirty seconds after adding the urine.

5. If there be albumin present in the urine it must be removed. If the urine be acid and contain but little albumin, the albumin is removed by heat and filtration. If the urine be not acid it should be rendered so by the addition of acetic acid, avoiding an excess, then heated and filtered. The filtrate should then be rendered alkaline

*Note.—Credit is due W. H. Snyder for valuable assistance in the experimental work of this paper.

before dropping into the Fehling's solution.

6. Remember that any strongly acid or even alkaline (from ammonia) urine, should be neutralized before applying the Fehling's Test, as diabetic urine quickly undergoes fermentive decomposition with the formation of lactic acid which will dissolve the sub-oxide of copper as soon as formed; again, urine undergoing alkaline fermentation holds a certain amount of the volatile alkalies in solution, which should be neutralized or boiled off, as they in turn would dissolve any small amount of reduced copper. If there be a large quantity of albumin present in the urine, it can best be removed by saturating with sodium sulphate crystals, boiling and filtering.

Substances in urine other than sugar, that reduce the coppor solution when heated, are uric acid, urates, xanthin, hypoxanthin, kreatinine, (5*) indican, pyrocatechin, (6) alcapton, (Boedecker) nephrozymose (7) (Béchamp) urohodinic and uroleucic acids, (Kirk) (8) glycosuric acid (Marshall) (9 and 10). The organic substances isolated from the urine by Boedecker and Kirk are said to reduce the copper solutions but not sub-nitrate of bismuth (6).

The therapeutic agents that reduce the copper solutions are, turpentine, chloroform, chloral, (which appears in the urine as urochloralic acid) (3), ether, carbonmonoxide, amyl nitrite, camphor, benzoates, curara, cubebs, morphine, salicylic acid, hydrochinon, phenol, benzol, tannic acid, salol.

Delicacy of the Fehling solution in the cold: 1. In testing the delicacy of Fehling's solution we placed five test tubes aside in a cold place for twenty-four hours containing equal parts of the Fehling and a (1), (½), (¼), (⅛) and ($\frac{1}{16}$ per cent.) of grape sugar. In all we obtained decided reductions.

2. At the same time we placed tubes away containing (1) Fehling and uric acid (2) Urates (from abnormal urine. (3) Xanthin. (4) Hypoxanthin. (5) Kreatinin. (6) Albumin. (7) Mucus. (8) Pus and mucus. (9) Solution of peptones; not obtaining the least sign of a reduction in any of the nine.

From our experiments with the copper solution, we consider a sure way to detect the presence or absence of an abnormal amount of sugar in a given sample, is to set away equal parts of Fehling and urine in the cold for 24 hours; when if sugar be present to the amount of 0.1 of 1 per cent. you will have a reduction of the red or yellow sub-oxide of copper: That you may have a large amount of uric acid, urates, pus, albumin, etc., that would on heating reduce the copper, but in the cold have no effect.

Bottger's Bismuth Test. (11) To a solution of grape sugar or diabetic urine add an equal volume of a concentrated solution of sodium carbonate, then add a small piece of the basic nitrate of bismuth and boil the mixture. The bismuth is reduced to a sub-oxide, the reduction being indicated by the change in color of the bismuth to gray and if sufficient sugar be present, to a black. As this is given as a reliable test in nearly every work on the subject and as it is so universally employed by physicians, it might be well to give in full the results of our experiments; using Nylander's modification of Bottger's test (12) we applied it to the urine, etc., in the following manner:

1 In a test tube containing three-fourths to one-half volume of urine, again heating to the boiling point. Of thirty-three samples of normal urine so treated, every one gave a marked reduction.

2 After fermenting normal urine with yeast we still obtained a reduction.

3 We placed seven samples of urine of high specific gravity, away in the cold with an equal amount of Nylander's solution and examined after 24 hours and no reduction had taken place.

We next placed equal parts of a 5,2 and 1 per cent. solutions of grape sugar and Nylander's solution away in the cold 24 hours with negative results. We found:

1 Heat must be used to bring about the reduction.

2 Every sample of normal urine tried in this way gave more or less of a reduction.

We desired then to find, if possible, the substance or substances in normal urine which gave the reduction.

Thinking that it might be some of the sulphur compounds, we boiled the bismuth solution with potassium sulpho-cyanide, taurin, etc., with negative results. Next the precipitate of bismuth reduced by heating with twelve samples of normal urine was washed thoroughly and tested for sulphur but found none. The question of

*See references to papers.

the sulphur compounds as giving the reduction being dismissed, we tested with glycogen, acetone, succinic acid, pepsin, etc., with negative results. Finally on applying dilute solutions of both albumin and peptones we obtained heavy reductions a .01 per cent. solution of peptones giving strong reduction, proving to our satisfaction that this reducing substance in normal urine was probably some intermediate protein compound as nephrozymase (6), described by Bechamp as always present in normal urine and which Leube regards as a mixture of an albuminous and of a saccharine body.

Moore's (13) or Heller's (14) Test. To urine add an equal volume of caustic potash or soda, specific gravity 1.014, and boil the upper stratum of the fluid; if much sugar be present a dark brown color will be produced in the heated portion of the fluid. To find the value and delicacy of this test a 1 per cent. solution of glucose was treated in this way and compared with thirty-three samples of normal urine, eleven of these samples produced even darker brown color than the 1 per cent. solution of glucose. In diabetic urine the color is probably due to the formation of glucic and melassic acids (6).

Mulder's or Indigo Carmine Test. (4) Render a solution of indigo carmine (1: 1000) alkaline with sodium carbonate, boil this with one half its volume of diabetic urine, when the color changes from blue to purple, purple-red, yellow, and finally to straw-yellow color, after cooling and exposure to the air the various colors are obtained in the reverse order, until the mixture becomes blue again.

1. We found that strong sugar solutions, (5 to 10 per cent.) had no effect upon the color in the cold.

2. Heat should be cautiously applied, for boiling equal volumes of the indigo carmine solution and normal urine for any length of time dispersed the blue color in every one of the thirty-three samples tried.

3. We found that by using certain precautions, this test can be used to detect the presence of sugar in urine containing 2 per cent. or over, in urine containing less than that it is absolutely worthless, as was shown by the following experiment: Pour indigo carmine solution to the depth of one inch in three test tubes, render strongly alkaline with sodium carbonate, boil and add not more than an equal amount of a 5, 3 and 2 per cent. solution of grape sugar in the several tubes and allowed to stand until cool. In the 5 and 3 per cent. tubes the color is completely obliterated, in the 2 per cent. tube the color is changed to purple-red; now in all normal urines tested we found that if you heated both before and after adding urine the color was completely destroyed by the organic matter present normally in urine; hence in applying this test never heat after adding the urine and if the solution to be tested contains 2 per cent. of sugar, the blue color will be changed to purple or completely destroyed.

Urates, uric acid, kreatinin and inosite gave negative results.

Lactose acts the same as glucose, (15).

Fermentation Test. Fill a test tube to over flowing with a feebly acid diabetic urine, add a small piece of German yeast, close the tube with a tightly fitting cork or rubber stopper which has a small glass tube passing through it with one end extending down into the solution and the other bent at right angles; vinous fermentation will take place and the carbonic acid gas will rise to the top of the tube and by its pressure, will force some of the solution out through the small tube. The test tube should be left in a warm place for several hours when the stopper may be removed and the carbonic acid tested with a lighted match. This is one of the most reliable tests for sugar in urine containing more than 0.1 per cent. (16) but a control or comparison tube containing some of the same yeast and distilled water should be prepared and placed by the side of the tube and urine, as some specimens of yeast give off from themselves small quantities of carbonic acid gas; hence the preparation of the control tube should never be neglected. Grape-sugar is said to be the only carbo-hydrate found in urine that is broken up by the action of yeast as milk sugar, muscle sugar, etc. do not take a part in the fermentation, (6).

Alpha Naphthol and Thymol, (*Molisch*, 17-22.) To 2 c. c. of urine add two drops of a fifteen to twenty per cent. alcoholic solution of alpha naphthol and thymol, after mixing add an equal amount of strong sulphuric acid, a deep violet-red color with naphthol and a deep red with thymol will result if any carbohydrates or glucosides capable of yielding sugar (23-24) with sulphuric acid be

present. On diluting with water a violet blue precipitate is thrown down, soluble in alcohol and ether with a yellow color and in caustic potash with a golden yellow color; Molisch claims he can detect 0.00001 per cent. of sugar with his test, (3).

On applying this test to thirty-three samples of normal urines we obtain the reactions as stated above. This was sufficient evidence for some investigators to claim the presence of a small per cent of sugar in all normal urine. Before we accepted this statement however we wanted to prove by experiment that no substance other than sugar found in normal urine would give these color reactions. We submit in short the results of our work: uric acid, urates, xanthin, alloxin, allantoin, kreatinin, hippuric acid, potassium sulphocyanide, succinic acid, sodium and potassium phosphate, sodium chloride and sulphate gave no reaction: urea gave a slight red color with thymol but not with alpha naphthol; phenol gave the color reaction with both; peptones, a strong purple color with naphthol, none with thymol; inosite and lactose, none with naphthol; splendid reaction with thymol; acetone with thymol, none with naphthol; pepsin with thymol, not with naphthol; albumin in dilute solutions with thymol, slight with naphthol; finally normal urine after fermentation gave good tests with both. From the above tests we can see the reaction in normal urine need not of necessity indicate the presence or absence of sugar or carbo-hydrates, as any of the proteid substances as well as any of the phenol group will do the same. However if sugar be present in urine such urine can be diluted to such an extent that normal urine would give little or no reaction. Fifty per cent. of normal urines will give but a very slight trace of reaction after adding 100 volumes of water; others bear 150-200 dilutions, while some gave no reaction after the 50 dilution. Diabetic urine gave the reaction after being diluted from 300-400 times its volume.

Safranine Test, (25). Boil 1 c. c. of urine with 5 c. c. of a 1:1000 solution of safranine and 2 c. c. of caustic potash. Decolorization denotes diabetic urine; on cooling, the solution becomes turbid, unlike Fehling it is not affected by uric acid, kreatinin, chloral, chloroform, peroxide of hydrogen, or the salts of hydroxylamine. In using the test as given above, we found that every one of the thirty-three samples of normal urine would destroy the color if the boiling was continued any length of time. Three samples of normal urine after fermentation also gave reaction for sugar by this test. On trying several of the aniline dyes it was found that methylene-blue gave the same reaction.

Picric Acid Test, (26). Add to the urine an equal volume of a saturated aqueous solution of picric acid, and after the subsequent addition of a little potash, heat gently, when a marked reddish brown coloration will show itself. This change of color is due to the formation of picramic acid. By means of this color test Dr. G. Johnson makes a quantitative estimation of the sugar in diabetic urine. (26). In applying this test to thirty-three samples of normal urine, seven out of the number gave about the same color that was obtained from a 1 per cent. solution of grape sugar. We found furthermore that unless comparison tubes containing known strength of grape solutions were used, this test cannot be used in the urine. Every sample of normal urine will give a marked reddish brown coloration as is described above. Picric acid solutions are reduced by kreatinin, kreatin, inosite, and urine of patients taking choloral or sodium salicylate, (28).

Phenyl-Hydrazin Test, (*Emil Fischer* 29-32). Ultzmann's method modified by Bond, (Appendix B. Hoffmann and Ultzmann's Analysis of the Urine; Translated by T. B. Brune and H. H. Curtis, 1889).

"Into a test tube five inches long pour phenyl-hydrazin salt to the height of about 0.4 of an inch; add powdered crystals of sodium acetate to the same height above, and urine to one-half the height of the tube. This gives approximately by weight, one part phenyl salt, two parts sodium acetate, and fifteen parts urine; shake the tube gently until the sodium acetate is dissolved and then boil carefully for half minute; set the tube aside and examine for crystals. It is claimed for this test that it does not react with normal urine, that it detects sugar in as small quantity as does Fehling's test, and that it reacts with all substances of the sugar class which reduce alkaline copper solutions; thus it reacts with glucose, levulose, lactose, cane sugar, maltose, and sorbin,

but not with inosite or trehalose. The reagent does not spoil by keeping and its mixture with urine being antiseptic, allows the crystals formed to be detected weeks after their precipitation."

In taking the proportions used above I found that considerable caution was necessary to obtain good crystals. Instead of using two to three volumes of the urine to one of the salts, I found that to be sure of obtaining the phenyl-glucosazon crystals, even when large quantities of sugar were present, you must be careful and add but little more of the solution to be tested than to cover the dry salts, for like many crystalline bodies, they will not form in an excess of water, even when the crystals are practically insoluble in water. Our application is as follows: Place in a test tube equal volumes of phenyl-hydrazin salt and sodium acetate crystals, and add just a sufficient amount of the solution to be tested to nicely cover the phenyl-hydrazin and sodium acetate salts; heat gently to the boiling point and while heating agitate the mixture so that the phenyl-hydrazin is brought into intimate contact with the solution, otherwise it would rise to the surface and sides of the tube, and on continued heating would decompose. If over two per cent. of sugar is present in the solution, after heating half a minute and placing tube to one side for fifteen minutes, when, if the test is carefully made, you will have almost a perfect mass of lemon yellow crystals, forming in bundles or sheaves. These crystals can be studied under the microscope; a one-half per cent. sugar solution, after standing one hour, began to form fine spider-webbed-like crystals; on the addition of a few drops of acetic acid, the crystallization was hastened. A one and one-fourth sugar solution stood twenty-four hours before good crystals were obtained, showing from this that the time required for the appearance of the crystals depended directly upon the amount of sugar present. The crystals will melt at 204° C. They are only slightly soluble in water. The crystals in the mother liquor were found insoluble in $HC_2H_3O_2HCl$, HNO_3, H_2SO_4, NH_4, OH; with NaOH and on standing exposed to the air, the crystals were gradually decomposed, the solution taking on a deep cherry-red color. KOH manifested the same action only the color of the solution was a light orange-red. In finishing I would say: 1. Use concentrated solutions. 2. If crystals do not form within a half hour, at the ordinary temperature, cool the test tube to the freezing point, add one or two minims of acetic acid, and allow to stand fifteen minutes longer, when if no crystals form, we may be safe in concluding that we have less than one-half per cent. sugar present. Every sample of normal urine tested gave negative results.

Diazobenzol Sulphuric Acid Test, (3). To twenty c. c. of urine in a test tube made strongly alkaline with caustic potash, add an equal volume of the diazo-benzol sulphuric acid solution, (1 : 50) made faintly alkaline with caustic potash.

If sugar be present, the urine is at first yellowish-red, gradually becoming darker, finally dark red, and if there be much sugar present, opaque, (34); when strongly shaken the froth is carmine-red. Acetone and diacetic acid have a similar reaction, (39). Caution should be used in applying this test as the reagent is highly explosive, (35). This test is not satisfactory and many others are more reliable.

Ruber's Test, (36). The urine is treated with an excess of lead acetate solution, filtered and to filtrate ammonia is added until a permanent precipitate forms. The fluid is heated but not boiled. If sugar be present, the precipitate formed on the addition of ammonia, gradually assumes a rose-red color which vanishes slowly on standing; more quickly on application of heat, (60°–70° C.) giving place to a yellowish coffee color. Milk sugar does not give this reaction unless boiled for some minutes. Upon repeated trials this test was not at all times satisfactory: a number of normal urines gave a slight reaction for sugar.

The Polariscope Test. A urine containing more than three per cent. sugar will give a marked polarization to the right, if no albumin be present; but as it requires some practice, and the expense of the apparatus will prevent its use becoming general, we make no mention; however, a saccharimeter introduced by Dr. Ultzmann and of comparatively small cost, is being recommended by many analysts. For particulars, see (28), (27), (6).

In bringing the review of the qualitative tests for sugar to a close, I may say: My

experiments have extended over a period of two years during which time nearly every test applied to urine has been carefully studied and the tests which present themselves to us as the most reliable and which are in vogue in our Chemical Laboratory are, namely: Fehling's (in the cold), Phenyl-hydrazin, Fermentation and Polariscope tests; furthermore, that the other tests on repeated trials do not yield results that in all cases are free from doubt.

FORMULÆ FOR STANDARD AND VARIOUS TESTS.

FEHLING'S SOLUTION, (4). Weigh out 34.65 grams of pure crystallized copper sulphate, pulverize and dissolve in 200 c. c. of distilled water until the solution has a sp. gr. of 1.14; then dissolve in this solution, 173 grams of crystallized rochelle salts, (potass. et sodii tartrate.) Gradually mix the two solutions and dilute to one litre, (1000 c. c.) Mixture is of a deep blue color and 10 c. c. of it will just be decolorized by .05 gram of grape sugar. This solution will decompose easily and should be tested by heat and if no precipitate is thrown down the solution is still good. Other authorities (6) advise the two solutions being kept in separate glass stoppered bottles and mixed as needed, otherwise if kept any length of time the tartaric acid changes into racemic acid which reduces the cupric salts.

SCHMIEDEBERG'S MODIFICATION OF FEHLING'S SOLUTION, (3). 34.634 grams of copper sulphate dissolved in 200 c. c. of distilled water, with 15 grams of pure mannite dissolved in 100 c. c. of water and 400 c. c. of a caustic soda solution, specify gravity, 1.145, and dilute with water to one litre.

PAVY'S AMMONIATED COPPER SOLUTION, MODIFICATION OF FEHLING'S, (3). Dissolve 4.158 grains of copper sulphate in water with the aid of slight heat. Take another bottle and dissolve 20.4 grams of rochelle salts and a like amount of caustic potash together; mix the two, cool and add 300 c. c. of strong liquor of ammonia, specific gravity 0.880 and dilute to one litre.

HAINE'S MODIFICATION OF FEHLING'S, (37). Take 3 grams of copper sulphate; 9 grams of caustic potash; 100 of glycerine and 600 c. c. of water.

BARFOED, (37). Mix 200 c. c. of neutral solution of copper acetate (1.15) with 5 c. c. of 38 per cent. strength acetic acid. Add a few drops of this solution to urine, boil and if sugar is present, a red precipitate is thrown down.

BARRESWIL, (37). Take 60 grams of potassium hydrate and 40 grams of neutral tartrate of potassium, dissolve in 200 c. c. of water and mix with a solution of 65 copper sulphate in 500 c. c. of water.

CAMPANI, (37). To a solution of concentrated sub-acetate of lead, add dilute solution of copper acetate; add to the urine and if sugar be present a yellow to orange-red precipitate occurs.

CAPPAZUOLI, (37). A solution of hydrated oxide of copper in potassium hydrate; blue color if sugar be present.

NYLANDER'S MODIFICATION OF BOETTCHER'S TEST, (12). Two grams of sub-nitrate of bismuth; 4 grams of potass. et sodii tartrate; 100 grams of caustic soda of 8 per cent.

BREWCKE, (37). Boil fresh sub-nitrate of bismuth with 30 grams of potassium iodide and 150 c. c. of water after five minutes add 5 c. c. of 25 per cent. solution hydrochloric acid.

DUDLEY, (37). The sub-nitrate of bismuth dissolve in nitric acid; add equal amount of acetic acid and dilute to 10 volumes with water; 1 or 2 drops of this to urine made alkaline with NaOH and boil. A gray or black precipitate shows the presence of sugar.

FRANQUI AND VAN DE VYRE, (37). Boil the urine with hydrated bismuth in potassium hydrate and a reduction occurs if sugar be present.

PICRIC ACID AND POTASH, (27). Use one drachm of urine and one-half drachm of liquor potassium; 10 minims of picric acid solution; dilute to two drachms with water and boil: If sugar be present the yellow picric acid is changed to the deep-red picramic acid.

CAILLIAN, (37). Shake two volumes of chloroform with four volumes of urine; shake and the sugar will be in the upper layer of chloroform.

CASAMAJOR, (37). Shake urine with methylic alcohol and if sugar be present a slight cloudiness ensues.

KNAPP'S (37). To 10 grams of mercury in water, add 100 c. c. of caustic soda (1.145) and dilute to one litre.

LINDO, (37). A solution in caustic soda or potassium of the yellow substance ob-

tained by the action of nitric acid on brucine; yellow and then intensely blue.

MAUMENES, (37). Soak strips of white woolen in a 33⅓ solution of the per-chloride of tin ($SnCl_4$), dry; when boiled with a glucose solution it turns brownish black.

MAZZARA, (37). Heat urine with chloride of nickel, and if there is sugar present it gives a green precipitate.

HAGER, (37). To 30 grams of red oxide of mercury, add 30 grams of sodium acetate, add 25 grams glacial acetic acid and 50 grams of NaCl and 400 c.c. of water; dissolve and dilute to one litre; add an excess to the urine and if sugar be present there will be a separation of mercurous chloride. (Hg_2 Cl_2).

POLLAECI, (37). Shake the urine with 4 c.c. of water, add one drop of watery solution of ferric chloride; add 6 drops of sodium hydrate solution, then boil and add 3 drops of sulphuric acid; cool and add a fresh solution of red potassium ferrocyanide. Blue color.

PRATESI, (after Horsley) (6). Dissolve 2.5 grams of caustic potash in 60 grams of concentrated liquid potassium silicate and add 2 grams of potassium bichromate. On a strip of tin allow 5 drops to dry, when testing heat the tin and the drops turn yellow color; add urine, and sugar if present produces a green color.

HUIZINGA, (38 and 39). Urine made alkaline with potassium hydrate, add a few drops of molybdate or tungstate of ammonium; heated to the boiling and then acidulated, carefully with HCl, when a blue color is developed if sugar be present.

TEST FOR CARBO-HYDRATES, (39). Make the urine alkaline with KOH, then treat with benzoyl chloride; all the carbohydrates in the urine will be precipitated.

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CHLOROFORM INTERNALLY.

Dr. Steep (*Le Progrès médical*, No. 21, 1882) has employed chloroform internally in a large number of diseases. He has obtained no appreciable effects in diphtheria, whooping-cough, pulmonary tuberculosis, or acute gastric catarrh. If given in infantile diarrhœa, with a small dose of opium, it will arrest the disease. In old persons he employs the following formula:

℞

Vehicle	30–40 grams.
Chloroform	3–4 gtts.
Tr. opium	5–10 dgrams.
Subnitrate of bismuth	q. s.

FISTULA IN ANO—GENERAL CONSIDERATIONS—ETIOLOGY—SYMPTOMATOLOGY—DIAGNOSIS—PROGNOSIS.

By LEWIS H. ADLER, JR., M. D.,
INSTRUCTOR IN DISEASES OF THE RECTUM, PHILADELPHIA POLYCLINIC AND POST-GRADUATE SCHOOL.

A fistula which is not due to ulceration and perforation of the rectal wall from within is the result of a previous abscess. Such an abscess forms in the ischio-rectal fossa and although opened early by a free incision, even before the cavity becomes distended with pus, it frequently fails to heal. It may fill up and contract to a certain extent, but it does not become entirely obliterated; a narrow track remains, which constitutes the affection designated fistula in ano. Several reasons may be mentioned here as to why rectal abscesses should so frequently degenerate into fistulæ: one is that owing to an internal opening within the bowel, small particles of fecal matter find their way into the sinus, and then, acting as foreign bodies, prevent the healing; another cause assigned is, that owing to the frequent movement of the part by the sphincter muscles, sufficient rest is not obtained for the completion of the reparative process; and, finally, the vessels of the rectum are not well supported, and the veins have no valves; hence, there is a tendency to stasis which is unfavorable to rapid granulation. According to the authority of Mr. Harrison Cripps* if the fistula be divided, its surface will be seen to be lined with a smooth gelatinous membrane, which, when examined under the microscope is found to consist of granulation tissue exactly analogous to that found lining the interior of a chronic abscess. The leucocytes forming the outer wall of this membrane are but loosely adherent, and constantly becoming free, form the chief part of the pus which drains from the fistula.

RELATIVE FREQUENCY OF THIS AFFECTION.

In point of frequency, compared with other rectal diseases, fistula is next to hemorrhoids. This statement is contrary to the showing made by the published statistics of St. Mark's Hospital, as quoted by Allingham.* This table shows that out of 4,000 cases taken consecutively, and without selection, from the out-patient department of the hospital, there were 1,057 persons suffering from fistula, and 196 from abscess, of which latter number 151 subsequently became fistulæ, so that more than one-fourth of the above number of cases treated were fistula. Allingham also states that a recent examination of the records of the in-patients at the same institution, covering a period of some years, shows that two-thirds of those operated upon were cases of fistula.

Mr. Allingham† justly calls attention to one source of error, in drawing conclusions from statistics, which, is due to the fact that many patients suffer from more than one malady. He states that "it constantly happens that a fistula is found in connection with hemorrhoids either as the substantive disease or as a complication. Again, a fissure or circular ulcer often has a sinus running from it, so that that it may fairly be considered as the opening of an internal fistula, and the case called a fistula, or the sinus is not detected and the case is called ulcer or fissure."

Another fallacious element which should not be overlooked in the statistics of Mr. Allingham is pointed out by Mr. Chas. B. Ball.‡ St. Mark's has a special reputation for the cure of fistula. so that many persons suffering from that disease go there, and in this way the records are made to show an apparent greater frequency of fistula.

Mr. Ball also states§ that at the Dublin General Hospital, although fistula is common it is by no means the commonest of rectal diseases; and in his own practice this affection has not furnished more than one-sixth of rectal operative cases.

AGE AND SEX AFFECTED.—This disease is commonly met with during middle age, but it is by no means restricted to that period of life. Allingham states‖ that he has operated upon an infant in arms and upon a man over eighty years old.

*Diseases of the Rectum and Anus, second edition, p. 152, London, 1890.

*Diseases of the Rectum, fifth edition, p. 13. London, 1888.

†*Loc. cit.*, p. 13.

‡The Rectum and Anus, p. 66.

§*Loc., cit.* p., 67.

‖*Loc. cit.*, p. 13.

Dr. Henry R. Wharton* mentions having seen a number of cases at the Children's Hospital, Philadelphia, among which he records a case of complete fistula in a child a few months old.

Causes.—Fistula in ano may originate in ulceration and perforation of the mucous membrane of the bowel, as the result of the irritation produced by fecal accumulations (arising from any cause, such as atony of the intestines, irregularity of habits, rectal stricture, etc.), or by foreign bodies, such as fish- or rabbit-bones, grape- or fig-seeds; etc; more frequently it owes its origin to an abscess, which is caused by injuries, such as blows or kicks upon the anus, or by exposure to cold, as from sitting upon damp seats,—especially after exercise when the parts are hot and perspiring; it may also arise from excessive irritation of the rectum, occasioned by the presence of any of the forms of parasites which frequent the anus and its immediate neighborhood.

Other predisposing causes are thrombosed veins and suppurating hemorrhoids. Abscess, and then fistula, may likewise supervene in fevers and certain depraved conditions of the blood such as frequently give rise to boils or carbuncles.†

Finally, a tubercular or strumous diathesis seems to be as potent a factor in the causation of fistula as it is in other suppurative troubles. The tendency to the occurrence of abscesses and fistulæ in phthisical patients has long been recognized and has given rise to some doubt as to the propriety of resorting to operative measures in such cases.

Varieties:—For all practical purposes we may divide fistulæ into the following four forms:—(1) the *complete* fistula, in which there are two openings, one in the rectum, and one on the skin more or less remote from the anus; (2) the *incomplete internal* fistula, in which there is a communication with the cavity of the rectum by means of an opening in the mucous membrane, but none with the external surface of the body; (3) the *incomplete external* fistula, in which there is an external opening through the skin, but no communication with the bowel; and (4) the *complex* fistula, in which there are many sinuses and numerous external openings. Some of these tracks run outward; some extend up the bowel, beneath the mucous membrane; whilst others travel round the bowel and open in the other buttock, giving rise to the so-called *horse-shoe fistula.* The second and third varieties named, are often spoken of as *blind fistulæ.*

Symptoms.—The symptoms of fistula are not easily overlooked. Occasionally there is considerable pain present, but more frequently only a feeling of uneasiness about the anus is experienced. When a fistula originates, as I believe it most commonly does, from a pre-existing abscess, there is a sensation of weight about the anus, swelling of the integument, considerable tenderness upon pressure, pain in defecation, and constitutional disturbance associated with rigors. These symptoms are relieved after the matter is discharged. In complete fistula in ano, and in the incomplete internal variety, the evacuations are streaked or covered with pus and mucus, perhaps also slightly tinged with blood.

The chief discomfort to a patient with fistula is the discharge, in a greater or less quantity, of purulent or muco-purulent matter which is kept up from the sinus so long as it remains unhealed, soiling the linen, making it wet and uncomfortable, and producing an excoriation of the nates. The discharge is not of itself sufficient to be a source of great exhaustion, and does not interfere with ordinary occupations, so that many patients have had fistulæ for a considerable length of time and have been conscious of no serious ailment. The escape of flatus and mucus from the intestine, when present in complete fistula, will prove a source of annoyance as will also the passage of feculent matter, which will be expelled should the fistulous channel be very full.

An attack of secondary suppuration is always liable to complicate the presence of a fistula, due to a stoppage of the track by small particles of fęces, or by exuberant growth of the granulations. Such a sequela, of course, is attended with pain, until a new opening is formed, or one is made by the surgeon. In some cases, the original fistulous track becomes re-established.

Fistula in some persons, more particularly those of a nervous temperament, produces an impression of physical imper-

*Keating's Cyclopedia of the Diseases of Children, Vol. III, p. 341.

†Allingham, *Loc. cit.*, p. 14.

fection and weakness in their organization, which renders them miserable. As in other affections of the rectum, various reflex or sympathetic pains are experienced in cases of fistulæ; they are referred to the back, the loins, and to the bottom of the abdomen. When such pains extend down the leg and to the foot, they are likely to be attributed to sciatica, unless the history of the case is carefully studied and a critical examination made.

Ocular and Digital Examination. —Preparatory to making an examination in cases of fistula, as well as in all other investigations connected with the diagnosis of rectal diseases, the bowels should be emptied by an enema immediately beforehand. This procedure not only renders the exploration of the part easier and cleaner but, in women especially, serves to quiet the patient's fears of any untoward accident occurring, and therefore facilitates the thoroughness of the surgeon's examination, by securing the cooperation of the patient, as, in extruding the parts, etc.

In order to examine a patient with supposed fistula, he should be placed in a recumbent posture on a table or an examining chair, preferably on the side on which the external opening is situated, with the legs well drawn up toward the abdomen and the buttocks brought to the edge of the couch.

The anus and the surrounding parts should be carefully examined to detect any apparent lesion. If the external orifice of the sinus is prominent or if there is a sentinel granulation present, the outlet of the fistula will be obvious; but where it is small and located between folds of the skin, its situation may be demonstrated by making pressure with the top of the finger in the suspected locality, which will usually cause a little drop of matter to exude.

The site of a fistula may often be detected by feeling gently all around the anus with the forefinger, and finding an induration which feels like a pipe stem beneath the skin. A probe should now be passed along the fistulous track. In doing this considerable care is requisite, and the utmost gentleness should be observed, bearing in mind that the probe is to be directed by its own weight through the sinus, and not by force applied by the hand of the surgeon. If it does not pass easily, bend it and see if it cannot be coaxed along the channel. In many cases, it will pass directly into the bowel; when the probe has been passed as far as it will go without using any force, introduce the finger gently into the rectum. This should be done subsequent to the passage of the probe as otherwise, the introduction of the finger into the rectum will set up a spasm of the sphincter muscles which will greatly interfere with the passage of the probe. When the finger is in the bowel, it will frequently come in contact with the probe, which fact demonstrates the presence of a complete fistulous track; in other cases the mucous membrane is felt to intervene between the digit and the probe. In such cases the internal opening generally exists but is difficult to discover, sometimes because the examiner searches for it two high in the bowel. Palpation with the sensitive tip of the finger will often render the presence of the inner orifice obvious, upon coming in contact with an indurated mass of tissue. If such a spot be felt, the finger should be placed upon it and the probe passed towards the finger. Make sure that the fistula is a complete one by feeling the probe touch the finger. There may not be an internal opening, if not, see how near the probe comes to the surface of the bowel.

If a doubt still exists as to the completeness of the track, a speculum may be introduced into the rectum and the outer orifice of the sinus injected with either milk or a solution of iodine, when if there be an internal opening, the appearance of the colored fluid within the bowel will set the question at rest.

If the inner opening is not discovered by these methods, the case must be looked upon as one of external rectal fistula.

According to Ball* in those cases where the probe passes away from the rectum and is directed along the anal fascia to the upper portion of the ischio-rectal fossa, or where the entire substance of the rectal wall separates the finger and the probe, the case is one either of external rectal sinus, or of fistula originating in the superior pelvi-rectal space. In such cases, Mr. Ball states "that we must go farther, and try and find the cause, such as diseased bone, etc.; and in the female a

**Loc. cit.*, p. 77.

vaginal examination may show us a uterine or ovarian origin. Where there are numerous external openings it is necessary to carefully probe all of them so as to determine whether they are all connected and the direction which they take. The upper limit of the separation of the mucous membrane should also be made out, and search should be made for the presence of more than one internal orifice, if such is likely to be present."

The presence of incomplete internal rectal fistulæ is more difficult to determine than the other varieties of this lesion which have just been considered. It is the most painful form, though fortunately it is of infrequent occurrence. Its orifice may be located anywhere in the rectum, but is generally found between the internal and external sphincters. According to Allingham*, the circumference of this opening is often as large as an English three-penny piece, its edge being sometimes indurated, at other times undermined. The feces, when liquid, pass into the sinus and create great suffering—a burning pain, often lasting all day after the bowels have acted.

In this variety of fistula the feces are coated, more or less, with pus, or blood, and a boggy swelling is noted at some portion of the circumference of the anus. A peculiar feature of this swelling is often noted—viz., its presence one day and its disappearance in a day or two, followed by an increased discharge of pus from the bowel. This fact is explainable by the closure of the outlet of the fistula, caused either by a plug of feces or as a result of inflammatory swelling, which allows the collection of a quantity of pus and the consequent formation of a boggy tumor. The swelling disappears upon the re-establishment of the communication between the bowel and the sinus, and is attended by the profuse discharge of matter previously mentioned. This phenomenon is repeated over and over again, and indicates the nature of the disease.

In other cases of blind internal fistulæ, if the orifice can be felt, or if it can be seen through a speculum, a bent probe may be introduced into it, and made to protrude near to the cutaneous surface of the body where its point can be felt.

Loc. cit., p. 21.

Diagnosis.—The methods of diagnosing fistula have already been sufficiently detailed. A few words, however, as to differential diagnosis may prove useful. Fistula frequently co-exists with other rectal diseases; it is therefore important that an examination should be carefully made, so as to exclude such lesions for instance, as the presence of stricture, malignant disease, hemorrhoids and other tumors, etc. A thorough physical examination of the chest should also be made, to ascertain the presence or absence of phthisis, which so frequently complicates fistula in ano.

Serious kidney disease should be excluded before recommending operation, for obvious reasons.

In cases of caries of the vertebræ, of the sacrum, or of the pelvis, fistulous tracks may form and simulate anal fistula. In such instances a careful investigation will reveal the true origin of the trouble, and will show that the case is not one of ordinary fistula in ano.

Course and Prognosis.—This disease, untreated, has a tendency to increase. The longer its duration, the more tortuous and complicated does it become. Hence the earlier a patient submits to treatment the more favorable will be the prognosis; and the time and extent of the treatment necessary to effect a permanent cure will be correspondingly diminished.

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LYSOL.

Cadèac and Guinard (*Province Mèd.*, April 23rd, 1892,) have made a series of experiments on lysol, from which they draw the following conclusions: Lysol is superior as a microbicide to carbolic acid, creolin, cresyl, and other analogous products; it has not, however, any advantages over the antiseptics of established reputation. It is only really efficacious when used in solutions, which may be caustic and irritating. Although not destined to play a great part in surgery, it may often be useful in the prophylaxis and arrest of epidemics and epizootics. It is likely to be particularly serviceable in the disinfection of premises, privies, railway carriages, ships, wharves, stables, and cow-houses. It is readily soluble, sufficiently active and very cheap.—*Brit. Med. Jour.*

ELECTROLYSIS IN THE TREATMENT FOR THE DESTRUCTION OF SUPERFLUOUS HAIRS.*

By DR. I. N. BLOOM,
LOUISVILLE, KY.

I had the honor of reading a paper on this subject before the State Medical Society, in 1887. My object in addressing you this evening is to give you the deductions drawn from five more years of constant experience in the treatment of hypertrichosis. A more extensive contact with women whose faces were marred by this deformity has shown me its importance, and its effect, mentally and physically, upon many of those affected.

In the paper already referred to I cited case of a Swiss girl who had committed suicide despairing of any other relief from her trouble. Some two years ago another similar case came under my observation, and this with the melancholia and mental effect often noted in such cases, gives the affection greater importance than is usually attached to it.

In the five years which have elapsed since I addressed the Society, electrolysis has been given its proper place in the treatment of these cases, as the sole means by which the affection can be permanently removed. The principal objections to it are, first, the scarring which results in a certain percentage of cases; second, the pain attending the operation, and, third, the time required for the removal of a large number of hairs.

As regards the first, while slight scarring may occur with a certain frequency, which cannot be foretold, in the worst exples where the operation is properly conducted, the cicatrices are so slight as to be infinitely preferable to the original deformity.

A thorough knowledge of the operation, and its technique, and good judgment in its use in special cases, must govern; otherwise the operation is unsuccessful because of want of skill in the operator, or, where the current is too strong, scarring results.

Pain in the operation is always present; but with a greater knowledge and accurate measurement of the current, it has ceased to be a factor, and I have yet to see a patient who has been deterred from coming the second or third time, because of the pain produced by the first visit. It is best to prepare the patient for the pain she is to suffer. (My patients have been, with one or two exceptions, females). There is, of course, no practical method of local anæsthesia which will obviate the pain.

With a suitable light, which must be the very best, the patient must be seated in an easy chair with head-rest, the battery properly prepared, as I shall describe later on and the negative pole is grasped by the patient after the needle connected with the positive-pole has been inserted into the hair-follicle. After a short interval of which more will be said hereafter, the circuit is broken by releasing the negative pole, the needle is removed and the life of the hair is destroyed. This, in brief, is the operation.

I wish to speak in detail this evening of its technique. The kind and number of cells of a galvanic battery is immaterial, provided a current sufficiently strong, i.e., up to three milliamperes, can be obtained. Different operators prefer different batteries. I have used two kinds, and note no difference in the effect. In order to do good work, a galvanometer is not only much more important, but is absolutely essential. With it and a rheostat, all the other trivialities can be disregarded. I use a twenty-cell Waite & Bartlett battery, because I happen to own one, and it gives satisfaction. In the circuit I place the rheostat and galvanometer, the latter measuring milliamperes. I use all the cells in order that one shall not be used up more than another, and regulate the intensity through the galvanometer by means of the rheostat. In general, I aim to use the least number of milliamperes which in ten to twenty seconds I have found by experience suffices to permanently destroy the hair. This, I find, varies on different parts of the body, and not always with the coarseness of the hair. On the chin from one to one and one-half milliamperes for an average of fifteen seconds, is my rule. On the neck a little stronger, or the same number for a longer time. Scarring is most frequent on the upper lip, and, I believe, is often due to carelessness or ignorance of the operator.

*Read before Jefferson County Medical Society, July 20th, 1892.

Here one-half to one milliampere for ten seconds always suffices. The same measure holds good for hairs on the cheek.

I never like to operate with a stiff needle. I use a platino-iridium needle, although I imagine my flexible metallic needle might do as well. It is often necessary to bend the needle in order to get at hairs which would be inaccessible to one perfectly straight; as, for instance, such as are situated low down down on the neck. A steel broach is much more difficult to handle. The point should not be too sharp, as the "catheterization" of the follicle is rendered more difficult thereby.

The success of the operation is best told by grasping the hair with a pincette. When the papilla has been reached with a sufficiently powerful current, no traction is necessary: the hair comes away at a slight touch. It is best not to let them fall out, as it is often necessary to insert the needle a second time for hairs unsuccessfully operated upon, and this can only be determined by the resistance to traction at time of operation.

I regard a sitting of an hour's duration as the utmost limit:—Indeed, after seven years' work, I have come to the conclusion that a half hour is all that should be attemped by one who has to do the operation frequently. The strain on the eyes and on the nervous system is very great, and the work after a half hour is rarely as good as it should be. In an hour's time, I can ordinarily remove from sixty to eighty hairs, and of these, on an average but three to five unsuccessfully. Where a hair is operated upon a second time, there is no pain felt, as the first operation causes temporary anæsthesia for some distance around.

A very essential caution is that of not operating upon hairs too close together. Small vesicles are sometimes formed where two are operated on too close together, and the tissue between is destroyed by the electrolytic action, and scarring takes place. Wheals occur most often on the neck, and on the cheeks, but disappear in a few hours; rarely does one see more than minute punctures the day after the operation. A skillful operator draws no blood at all, as bleeding never occurs when the follicle only is entered. It is well to allow as long a time as possible to elapse between two operations, if the hairs are close together;—a week if circumstances will permit, otherwise four days, at least.

Except in trichiasis it is not advisable to operate on non-pigmented hairs; the point of exit from the skin cannot be determined accurately, and, besides, very often an appearance of baldness is left, which to say the least is not desirable. In non-pigmented hairs the per cent. of success is much lower because the papilla is missed so often.

It is well to have an assistant to keep time, and generally a friend of the patient will serve in that capacity. It is rather difficult to watch at the same time the galvanometer and the time-piece after the needle has been inserted.

The principal drawback is the danger of scarring, and patients who have been operated upon by inexperienced operators, hesitate to undergo a risk a second time. No battery is reliable without a galvanometer. The resistance to the current offered by different patients varies, as, indeed, it does in different places on the same patient. The batteries, too, vary, not only from day to day, in strength of current, but from hour to hour. One patient grasps the electrode more strongly than does another. It takes but a few minutes to regulate the resistance by means of the rheostat, and once having registered the desired number of millamperes, there is but little necessity for changing the rheostat in any sitting to maintain the required number.

In those patients who have practiced depillation, it is more difficult to insert the needle so as to reach the bottom of the follicle; the direction of the hair seems to be changed by frequently pulling it out. The use of depilatory powders has a similar effect.

Where a mole has growing in it a number of hairs, the removal of the hairs by electrolysis causes a disappearance of the mole, and usually without leaving a scar behind it. This is especially the case where the hairs cover the whole surface of the mole, and tolerably evenly distributed. It must not be forgotten, however, that wherever the hairs exist very compactly and they are all operated on at one sitting, a scar is bound to occur from the electrolytic destruction. Where a mole is non-hairy and elevated, and of some size, I transfix it in two directions, or more, if necessary, putting on a current of three

millamperes, and keeping the needle inserted for about a minute. In such cases the resulting scar is smooth, slight, and limited to the site of the mole; it does not involve the normal tissue as is apt to be the case with acids. I have taken off pedunculated fibroids from the face in the same manner. I have never yet had even a slight hæmorrhage.

I will not speak here of the use of electrolysis in the destruction of telangiectatic vessels, nor of its value in various forms of acne. In small growths of all kinds on the face, I prefer it to the knife and caustics, for reasons already mentioned. The operation is one which requires a certain amount of manual dexterity, together with a large amount of patience. I have removed as many as six thousand hairs from the face and neck of one lady; it is by no means uncommon to find a thousand pigmented hairs.

When the hairs have been allowed to grow long, by their growth they hide the entrance to the follicle, when they exist in large numbers. In such cases I cut them off to about one-quarter of an inch from the skin. It is best if the hairs have been plucked out, to allow them to grow at least one-tenth of an inch long before operating.

If all the hairs operated upon have been in a circumscribed place, there may be a sufficient amount of swelling to be temporarily disfiguring. This occurs most often on the lip. I advise my patients in such cases to bathe the face in water as hot as it can be born for a few minutes at a time, afterward applying Lassar's paste, or benzoated zinc ointment.

Dr. Bloom then reported briefly several interesting cases upon which he had performed the operation of electrolysis, illustrating same with his apparatus for the purpose.

DISCUSSION.

Dr. J. M. Ray: I have listened with interest to the reading of Dr. Bloom's paper, as quite a number of these cases come under our observation, especially where there are ingrowing lashes, and a number of them we operate upon. I formerly attempted more or less removal of the eye lashes, not in the elaborate manner as mentioned by Dr. Bloom, but with an ordinary galvanic battery, and the needle, a plain jeweller's broach. Dr. Bloom makes the statement that in all cases of trichiasis and distichiasis, the operation of electrolysis should be preferable to all other operations. We all know that trichiasis and distichiasis occur in the late stages of so-called granular lids, and in cases where as a result of long standing inflammation the conjunctiva becomes cicatrized, and the under surface of the lid becomes shorter than the outer surface, carrying the inner angle of the free edge of the lid with the contained lashes against the cornea. In some few cases, before the incurvation of the lid occurs, the inflammatory action extends below the mucus membrane and into the foot of the hair and thus partial trichiasis results. As long as cicatrization goes on in the conjunctiva, there is an increased tendency to incurvation of the lids and increased number of lashes that will brush against the cornea, thus keeping up the irritation.

The operations for remedying trichiasis and entropion, I think, I brought up at a meeting of the Medico-Chirurgical Society a few weeks ago, at which time I read a paper on "Plastic Operations about the Eye Lids." I am in perfect accord with Dr. Bloom in the statement that where there are a few lashes turned against the eye, the early removal by electrolysis is the method to be preferred: However, if you have a case where there is extensive cicatrization of the conjunctiva in addition to the in-turning of the lashes, you want to restore the position of the lid. The operations that we make on the edge of the lid are twofold in their nature, and really the primary part is the turning out of the inner angle of the lid margin,so as to prevent rubbing over the cornea by the sharp angle of the lid; in carrying the edge of the lid out , we also carry the lashes along with it.

In the majority of cases that I have operated upon recently, there has been extensive in-curvation of the edge of the lid in addition to in-growing of the lashes. I think where all the lashes are turned in, or, say, one-half of them, that the plastic operation, restoring the lashes to their natural position is more desirable than the removal by electrolysis,because electrolysis would produce complete baldness of the lid, which, as you know, is quite a deformity.

Referring to the cases Dr. Bloom has

seen which have been operated upon by occulists where there was great deformity as a result of in-growing tissues. Of course the result may not be perfect in all cases; while the lid may be in its normal position, still there may be a few lashes that continue to rub against the cornea on account of the operation not being infallible. In the particular case Dr. Bloom mentions, if he had seen the woman before I operated upon her, he would have noticed that every lash was turned in against the eyeball. I made an incision along the free edge of the lid and removed a piece of skin from the outer surface of the lid, leaving a gap along the edge to be filled by cicatricial tissue, thus holding the lashes away from the cornea. In the majority of cases, in addition to extensive in-growing of the lashes, we have in-turning of the edge of the lid, and in these cases I have employed Green's modification of Von Burrow's operation, and the results have been very satisfactory.

Dr. I. N. Bloom: Concerning the use of anæsthesia in these cases, I have a great many patients come in and ask if I use cocaine. Four or five years ago when cocaine was introduced, I used it in one or two cases when operating for the removal of hairs, injecting a small amount of cocaine; but I think the administration of it gave the patients more pain than the insertion of the needle without it. I would much rather stand the pain of having fifty hairs removed than the pain of one hypodermic injection of cocaine.

As regards Dr. Ray's remarks, I want to acknowledge that I overlooked the fact that the rough margin of the lid is an important factor in causing irritation. Where the trouble is purely and simply irregular hairs, I think these hairs might be trained. In many cases you can train a number of them to grow straight. I will further state that I never saw a slighter deformity after so extensive an operation, as in the case of the patient referred to me by Dr. Ray. Another thing I quite forgot to mention is, where the trouble is simply due to in-turning of all the lashes, and there is no roughness of the lids, the operation of electrolysis would not even be justified, because baldness would follow. An operation giving new directions to the lashes would be preferable, even with slight deformity, rather than remove all the lashes. Concerning melancholia resulting from this disease; outside of the two cases mentioned I know nothing.

It may be that my successful experience in the last few years has been owing to the fact that I have been lucky with my patients, but I think the per cent. is due to the use of the smallest amount of electricity and using it for a longer time than was formerly done. However, it is barely possible that I have just been lucky, and that a slip will come soon and scars will occur in a larger per cent of the cases. I do the operation very frequently, have had as many as three cases upon which I have operated in one day.

The distress with which some women observe these hairs I want to say is remarkable, and I will mention the case of a young lady who was placed in correspondence with me by a friend. She wrote me greatly exaggerating the number of hairs, stating the trouble and annoyance caused her, etc. I told her to let the hairs grow sufficiently long, then to come here and I would operate. The young lady came down and I found that she had about fifteen rather light hairs, which were very easily removed. This young lady who was only nineteen or twenty years old, had almost been a monomaniac on the subject for three or four years.

CANCER IN RELATION TO INSANITY

From a somewhat extended inquiry into the above subject, Dr. Herbert Snow, surgeon to the Cancer Hospital, London, concludes that:

I. "Cancerous disease among the insane is rare.—Among individuals with congenital mental deficiency it seems to be almost wanting.

II. "Cancer is not increasing in frequency among the insane.—This fact is of no slight importance in connection with the view of cancer, as specially a disease of civilization largely caused by depressive mental emotion; and with the explanation of its greater prevalence in recent years on the ground of the increasing wear and tear which the nineteenth century life involves.

III. "Cancer not uncommonly precedes and causes mental derangement without cerebral tumor formation.—It should rank among the recognized causes of insanity."—*Journal of Mental Science*, Oct., 1891.

Society Reports.

SURGICAL SOCIETY, OF LOUISVILLE.

Stated Meeting, June 11th, 1892.

Dr. A. M. Cartledge, Vice-President, in the Chair.

RESECTION.

Dr. W. C. Dugan: I have two cases of resection to exhibit.

This patient was brought into the city hospital a few months ago, with acute inflammation of the elbow joint. He was admitted to the medical ward and had been treated by the physician in charge who thought the trouble to be rheumatism. The arm continued to increase in size, patient had considerable fever and great pain in the arm and was referred to me for operation. I decided after a thorough examination to do a resection making a long, straight incision over the posterior part of the elbow. This was done and we found a large amount of tubercular matter, and the bone very extensively diseased. I then resected the lower end of the humerus leaving just the epicondyle eminences in order to preserve the muscular attachment, making a convex section of bone. and then cut through the olecranon process and moved it on a level with the coracoid process and scraped all the synovial membrane out. The wound was filled with iodoform gauze and arm put up in extension. The arm was enormously swollen; the dressing was changed every three or five days and the splint removed in one week and the arm put in a sling. He now has practically no pain or soreness about the joint, has good movement and he is in good condition and is going to have a good arm. The operation was done on the first of March and he has improved all the time.

I desire to call special attention to the absence of lateral motion which is usually found after these operations, which I account for by the saving of the epitrochlea and epicondyle eminences to which are attached in part the lateral ligaments of the joint.

The next case is one that I have already reported, but have never shown him, hence my excuse for again referring to the case. This young man twenty-two years of age was in the city hospital a year ago, suffering with tubercular arthritis of the right knee. I decided to resect the knee joint and at the time of the operation was undecided whether we would do a resection or just an arthrectomy, so we made a transverse incision, sawing through the patella turning it back to find out if the condition of the bones were such as to call for the removal of the articulation or the scraping out of the diseased structure. But both the femur and tibia were extensively diseased, so they were sawn off and the synovial membrane all carefully dissected out. The operation was done and the leg put up in fixed dressing which was left on for three or four months. The dressing was then removed and the patient got along well, as you see here; he has as good stiff leg as one could expect to secure.

An interesting feature in the case was this: a few months afterward acute tubercular arthritis developed in the other knee; considerable fever, night sweats, etc., and the question was then what were we to do with it. I at once decided to open it, thoroughly washing out with bichloride solution and inject iodoformized oil and tamponing with gauze, and the result is here to-night to show for itself. The joint was thoroughly opened in the presence of the class on both sides and the tubercular material scraped out with my finger and Volkmann scoop, and the joint cavity treated as above indicated. It was then tamponed with iodoform gauze which was left in for about a week; at the expiration of this time the dressing was taken off, the gauze removed and the joint again filled with iodoformized oil, and left, I think, for three or four weeks. When removed the next time I found that the wound had healed entirely and from that time the patient had no more trouble. To-day but for the presence of the incision no one would suspect the joint was ever opened. I would have resected the other knee had it not been for the fact that he already had one stiff knee. I am confident that if the first knee had been treated as the last one the result would have been equally as good, for the symptoms were about the same.

I have treated a number of cases of tubercular arthritis and osteitis with iodoformized oil, and am very much pleased with it.

Dr. A. M. Vance: There is very little to be said about these two cases, except to compliment the orator. I congratulate Dr. Dugan upon the successful result and would like to ask if there was any complication or specific trouble in the last case exhibited.

Dr. W. O. Roberts: The first case exhibited by Dr. Dugan reminds me of one that I operated upon some time since. The patient was an engineer on the railroad. The operation was performed in about the same manner described by Dr. Dugan, and the results very gratifying; he is now able to run his engine.

The case of resection of the knee joint is of considerable interest and the operation seems to have been a very successful one. I also operated on a case of this kind some time ago, where it was found necessary to not only remove the cartilages but a considerable portion of bone, and I was very much afraid that leg would not grow any more; however, it did and there was very little shortening. The result of the other knee operated upon by Dr. Dugan I think is marvelous, perfect as it could possibly be and he is to be congratulated upon the outcome.

Dr. W. L. Rodman: These cases are certainly very interesting ones, and I have never seen better results from resection of the elbow joint. I had a knee case that I expected to exhibit here to-night, but the man was a little sick and could not come. More than a year ago a tinner was working on the roof of a house and fell and ran a rusty nail into the capsule of his knee joint. I saw the man in consultation a few days after the injury. Found he had a well marked synovitis of the knee joint, I decided that something must have gone into the joint, as I believed suppuration to have taken place, and the only thing to do was to make an exploration. I found nearly a quart of pus in the capsule of the knee joint, in addition a nail without head. I made a free incision on each side, introduced two large rubber drainage tubes through which the joint was irrigated twice daily for at least two weeks. The man has gotten along nicely and has as good a knee joint as he ever had.

Dr. A. M. Cartledge: I think the left knee joint case is one of intense interest, as it puts side by side here in a certain measure two operations: one the resection, the other the injection of iodoformized oil; I do not think we should attribute the great benefit to injection of iodoformized oil; I believe that in many of these cases of tubercular joint trouble, a simble free incision of the joint with thorough scraping out of the tubercular matter or without scraping if free drainage is established, will be followed by the same result as when iodoformized oil is injected. I do not want to be understood as speaking against this agent, but, I believe, the same results could be obtained by simply tapping the joint. I have read the very interesting and successful results reported by Senn who used the injection in cases of this character.

Dr. W. C. Dugan: I prefer the iodoformized oil and after reading Senn's reports on this subject I am thoroughly convinced that iodoformized oil has some especial effect in these tubercular cases. I believe that the surgical literature on joint troubles should be re-written. I think many cases of acute inflammation of the joints could be hurried to a favorable termination by opening the joint early. Dr. Vance was leaving the city and left in my charge a professional base ball player with an acute suppurative arthritis. We thought that by frequent aspirations we could get along without arthrotomy; after Dr. Vance left the symptoms became more severe, and so the joint was freely opened, washed out and treated as above suggested. The patient made an uninterrupted recovery, and to-day has as good a knee as anybody and is playing behind the bat as successfully as before the accident.

UNUNITED FRACTURE

Dr. W. O. Roberts: Here is a patient that was before this Society some time ago. He had his leg broken in a railroad accident on March 21st. 1891. It was a transverse fracture and as I reported it was dressed in plaster which was removed at the end of twelve weeks, and there was nothing but a fibrous union with comparatively little shortening, probably about one-half an inch. I then decided for the purpose of creating an irritation we would let the man walk about and see if we could not get a bony union. This he did for some time, but no union resulted. I then used a Smith's splint with no more favorable result. In October assisted by Dr. Vance we put the man un-

der the influence of chloroform and rubbed the ends of the bones together, Smith's splint was again applied and the man allowed to walk. But soon afterward he felt that the bones were slipping and the leg was growing shorter and shorter, until finally there was a shortening of about two inches, still he was able to walk with the aid of a cane. On the 8th of March 1892, a little less than a year after the original injury, we cut down on the fractu re Drs. Vance, Dugan, Hueser and Pearce assisting in the operation. We found the bones widely separated, there were no signs of a union whatever. The ends of the bones were sawed off in such a manner that we could in a slanting way draw them together. The ends of the fracture were then fastened together with a large bunch of silk-worm gut and the leg put up in plaster dressing. The man got along without any trouble for a week, at the end of that time there were evidences of suppuration. We removed the dressing and as anticipated, found some little suppuration had taken place. We washed it out thoroughly with peroxide of hydrogen and put the leg up again in plaster. There is now perfect union of the fracture, but there is still a small fistulous opening.

Dr. A. M. Cartledge: What was your idea in using silk-worm gut for fastening the ends of the bone together?

Dr. W. O. Roberts: There were two reasons: We thought we could better sterilize it than any other material, and then the silk-worm gut is less liable to break than silver wire. If you use wire for suturing bone, and draw it sufficiently tight to firmly hold the fragments together, it is very liable to break.

Dr. Turner Anderson: I remember at the time you exhibited this patient before the Surgical Society, you stated that a successful result was very rarely obtained. The question was whether it would be desirable to attempt the operation in this case, or let the man limp along in the state as presented. Now, is this result liable to be permanent?

Dr. W. O. Roberts: I think the result will be permanent. There have been a number of the kind operated upon in this city, and, excepting one, this is the only case I know of where perfect union has taken place.

Dr. D. W. Yandell: The same thing occurred to me as mentioned by Dr. Anderson, that is how many of these operations are really successes. However, in this case, it looks as if it ought to be permanent.

Dr. A. M. Vance: I saw this patient several times with Dr. Roberts, and assisted him in the operation, the result of which you see to-night. I believe in this case the result is going to be permanent. It is the first one I have ever seen where union took place after the operation. There is one point in the case that has not been mentioned: The shortening or slipping by of the bones was so great that it required all the strength of two men after we sawed off the ends to stretch the tissues to get the ends of the bone into apposition. I believe they would have remained so without any suture, and the perfect coaptation possibly explains the good union and result. I am glad to see the good result from the use of silk-worm gut, and think this case demonstrates it to be the best suture material for bone. I do not believe in silver wire at all, it always leaves a sinus, has to be cut out, and always breaks once or twice as a rule before you have drawn it sufficiently tight to do any good.

Dr. W. L. Rodman: This is certainly a most interesting case, and the only case of ununited fracture I have ever seen where the result was so gratifying. I have never cut down upon the fragments of an ununited fracture myself, but have assisted in four or five operations and this is the only one in which union has taken place. In the other cases there was no suppuration, and in this case there was free suppuration, which may have something to do with explaining the good result. A distinguished English surgeon while in this city last fall, operated on a case of non-union fracture of the ulna. The operation was done under strict antiseptic precautions and there was no suppuration after the operation. The result at the end of eight weeks seemed to have been all that could have been desired; there was an abundance of callus, which seemed to be very firm. At the expiration of ten weeks, there seemed to be a little motion at the seat of the fracture, and less callus than there had been previously. At the end of eleven or twelve weeks motion was quite distinct, there was less callus, and apparently no bony union

whatever. The case is no better off than before the operation.

I do not agree with Dr. Vance in what he says concerning silver wire always causing suppuration. This case I have just mentioned proves that it does not cause suppuration. A large amount of silver wire was used and none of it was seen afterward. It never caused any suppuration at all, and it is in his arm now. Certainly silver wire is just as antiseptic as anything that can be used in these cases.

Dr. A. M. Vance: I would like to ask Dr. Rodman how many times he has seen good results from the use of silver wire in the character of cases referred to.

Dr. W. L. Rodman: I only recollect one other case, but the fact is well established that silver wire is the least irritating of all suture materials.

Dr. W. C. Dugan: I agree with Dr. Vance in regard to silk-worm gut; I think it is better than any other suture material for the reason that you can apply it, and there is no breakage at all. I want to disagree with him, however, as to the disappearing of wire; I saw a case the other day that I operated upon a number of years ago for fracture of the patella using silver wire suture, and the wire is still in. Of course I recognize that we sometimes do have suppuration following the application of it. This is simply another case like that referred to by Dr. Rodman where the wire has remained in a number of years and has given no trouble.

Dr. A. M. Cartledge: I have had very little experience in suturing ununited fractures. In suturing the patella I have used the over-prepared gut. In the case I exhibited to this Society some time ago who was operated upon for fracture of the patella, gut was used for suture, and the patient is able to walk as well as he ever could. I still believe that the over-prepared gut is the best suture material.

In regard to the production of callus; I question if suppuration adds anything to the production of true callus. I think if we do a perfect operation and by artificial means protect the formation of callus, there is very little reason for irritation. Certainly I cannot see how a suppurative process adds anything to or induces the formation of callus. In a simple fracture the formation of callus is greater than in a compound fracture which suppurates. Now, I believe that in the fracture of bone surfaces, if we maintain perfect apposition for twenty-five days, the uniting process will be so far advanced, if it is going to unite at all, that it needs no assistance from artificial means, between the fractured ends, hence the futility of agents which remain after that period.

In this connection I would like to make a continued report of a case mentioned at a previous meeting of this Society: I refer to the man having a compound fracture of the forearm, both the radius and ulna were broken and a fragment one and one-quarter or one and one-half inches in length was broken entirely out of the ulna, there was also perforation of the radial artery. The broken fragment was removed and thorough drainage established. In twelve weeks there was firm union of the ulna but the radius has never united. The arm at the time of operation was put up in plaster dressing and everything was kept perfectly aseptic. I propose in a few days to make an incision over the radius and unite the ends of the bone by a ligature.

Dr. W. O. Roberts: I have very little to add, except that I agree with Dr. Vance that it is probable no suture had been used the union would have been just as I believe the fragments would have remained in apposition. Treeves in his work on operative surgery, which has only been out a short time, advises that no material be used to fasten the ends of the bone together. He says all that is necessary is simply to saw off the ends of the bone and put on a plaster dressing which will hold them in apposition. This is what I believe.

Dr. D. W. Yandell: Do you think the surgeon as a rule sutures the bone for the purpose of keeping up irritation?

Dr. A. M. Cartledge: Partly, but it is more to obtain a perfect apposition.

Dr. D. W. Yandell: Then why do you remark at the end of twenty-five days is no need for further apposition?

Dr. A. H. Cartledge: If we can maintain perfect apposition for that length of time, I believe union will have taken place, provided it takes place at all.

Dr. D. W. Yandell: Do you mean to say that catgut is the best suture?

Dr. A. M. Cartledge: That is my opinion.

Dr. D. W. Yandell: There are so many different kinds of suture material,

that the world will never agree to which is the best.

PLACENTA FROM A CASE OF PLACENTA PREVIA.

Dr. Turner Anderson: I beg to exhibit a placenta from a case of previa; patient thirty-four years of age; in her third pregnancy. The membranes are intact except at point ruptured in treatment. One-sixth of the mass was inserted over the os, (previa partialis). First hæmorrhage occurred at seven months, was controlled by rest. Feeble pains and severe flooding came on one month later, which was temporarily controlled by efficiently applied tampon. I saw the case in consultation a few hours afterward; upon removing tampon the os was found dilated to about the size of a silver dollar. The pains were feeble and infrequent. The vagina soon filled with blood and very active hæmorrhage recurred. It was deemed unwise to further rely upon tampon, and the patient being given chloroform the attached portion of placenta was freely separated and membranes ruptured. The breach was found presenting, and a foot was brought into the vagina, thus effectually plugging the os with half breach. Hæmorrhage at once ceased and case terminated in birth of still child.

Concerning the treatment of this condition: I think the obstetric maxim—"That a contracting womb when emptied of its waters, cannot bleed to a dangerous extent," a most precious truth, both in accidental and unavoidable hæmorrhage. I would advise the induction of labor in previa in all cases as soon as the condition is diagnosticated; control bleeding with tampon until pains occur, and then rupture membranes, detaching the placenta from the os as far around as possible. Usually this is enough—help with forceps or version if indicated, but, remember the maxim above quoted, and do not be too hasty.

Dr. W. C. Dugan: Did I understand you to say to say that the pregnancy was eight months advanced in this case, and you simply sacrificed the life of the child in order to save the mother? Do you not think it advisable in these cases to endeavor to save the child's life by Cæsarian section, since it is clearly demonstrated that the operation as regards the mother is not very much more dangerous than an ordinary laparotomy, and at the same time the child, if the operation is done early, will be saved?

Dr. Turner Anderson: Owing to the condition of the patient at the time, I did not think we were justified in attempting Cæsarian section. The life of the child was not considered.

Dr. W. O. Roberts: I have only seen one case of placenta previa, and in that case the woman came near bleeding to death. It was a vertex presentation and I did as Dr. Anderson has suggested; that is, tamponed the vagina until uterine section came on, then ruptured the membranes and accomplished delivery. In this case both the mother and child lived.

Dr. W. C. Dugan: The question I asked Dr. Anderson is one that has been brought up a number of times in cases of advanced pregnancy, after the child has arrived at the age of viability, whether or not it would be best to perform Cæsarian section after applying the tampon. This operation has been very successful in a great number of cases of pelvic obstruction, both the mother and child being saved, and the mortality acccording to the reports of American and foreign operators is so low that the operation is one of the recognized surgical procedures.

Dr. H. H. Grant: I have seen three cases of placenta previa, only one of which I saw before the membranes had been ruptured. In one of these cases Dr. Anderson reached the patient almost as early as I did, and in a very few minutes with his assistance delivery was accomplished, saving both the baby and mother.

In another instance I saw the patient after tampon had been applied by another physician very effectually, but the patient was perhaps thoroughly exanguinated and labor was very feeble. She was delivered during the night, baby dead. The patient did very well for a few days, but on the sixth day developed septic fever and died.

The other case which I saw before the membranes had been ruptured, the os was very small, tampon was applied and kept in the vagina for twelve hours, then removed but the os was not dilated and it was again applied and removed at the end of twenty-four hours when the os was sufficiently dilated to allow introduction of the hand. This was carefully done and delivery rapidly accomplished. In this instance the mother recovered without any

difficulty, but it was evident that the child had been dead for at least twenty-four hours. I think we should rely upon the tampon to control hæmorrhage in these cases, changing it every twelve hours until uterine action is established and the os becomes sufficiently dilated to deliver the patient.

Concerning the point raised by Dr. Dugan with reference to performing Cæsarian section: This is answered by the fact that only with the most favorable surroundings is this operation justifiable, and it is the exception rather than the rule that we encounter those favorable conditions in the homes of our patients. If the patients could be placed in a hospital especially equipped for the purpose, then I should favor Cæsarian section, but, under the conditions in which we usually find them, I should be decidedly against attempting it.

Dr. J. G. Cecil: Dr. Anderson in his resumé of the modern treatment of placenta previa, has left us nothing to discuss. I certainly can find no point upon which I would in any way disagree with him. My experience in placenta previa is limited, but I have found the methods detailed so clearly by Dr. Anderson to be those which are the most successful in the cases I have had to deal with.

I do not agree with Dr. Dugan as to the advisability of Cæsarian section in these cases. I think it is an operation which can hardly become universal; in the nature of things it cannot, because these emergencies which arise in the practice of the general profession, that is, the general practitioner, so often are out of the reach of men who are capable of doing a Cæsarian section. Therefore, it is hardly necessary to consider it, outside of the centers of medical teaching. Then, again, those conditions under which Cæsarian section would be justifiable or advisable at all, are the very conditions which with the improved idea of managing these cases, I think, makes it rather against the use of the knife. In other words, I think cases may be managed in the manner laid down by Dr. Anderson with better hope of saving both the mother and child, than with Cæsarian section under any circumstances, at least it seems so to me. I take it if you please to operate upon a woman before she has lost much blood, before the rupture of the bag of waters, then the chances of Cæsarian section would perhaps be the thing comparatively speaking; but these are the very conditions which favor proper conservative management of these cases without the Cæsarian operation. For that reason it seems to me that the question of Cæsarian section in this class of cases will hardly gain much, if any, hold, especially among general pracitioners.

Dr. A. M. Cartledge: Cæsarian section in cases of placenta previa is a question that is exciting a great deal of attention, and I would like to hear it discussed at greater length.

OVARIAN TUMOR.

Dr. W. O. Roberts: The specimen which I exhibit is an ovarian tumor removed from a lady from a section of an adjoining State where very large tumors seem to develop, as this is the third one I have removed from patients in the same locality.

This patient was a lady sixty years of age; she first noticed the tumor about two years ago, because of the fact that it troubled her in stooping—she felt crowded about the abdomen. It is one of the largest tumors I have ever seen; it felt through the abdominal walls as though there was a great deal of solid material, especially on the right side. The patient was put on the table to be operated upon, and we detected in the lower part of the abdomen just above the pubes a rather diffuse lipoma. A large incision was made extending about an inch above the umbilicus; the first cyst we encountered was punctured, containing about two and one-half gallons, and after emptying it we were enabled to partially deliver the tumor through the abdominal incision, then it became necessary to open another cyst, and I believe before the tumor was entirely delivered, there were three cysts opened. There were no adhesions whatever of the tumor to the wall or to the intestines, but there was an adhesion of the intestine to the pedicle. After removal of the tumor there was no vessel to be ligated at all after ligation of the pedicle, but for fear the adhesion of the intestine to the pedicle might give rise to some trouble, I detached it. The cavity was thoroughly washed out and a drainage tube introduced. The tube was just long enough to reach to the bottom of the pelvis and it is one of the longest that I ever had used. I exhibit

the tube here in order that you may see its length. The operation was done last Saturday morning at ten o'clock, and Saturday night at eleven o'clock I was summoned hurriedly to the patient, the message being that she was bleeding profusely. When I reached there found her general condition good, pulse unchanged, temperature 99°. There was no evidence of loss of blood, but the bedding was considerably stained and the pus basin which had been placed between the patient's legs contained about four ounces of very red fluid. The drainage tube after the operation had been emptied every half hour and there would be at each aspiration of the tube from one to three drams of red fluid. This profuse flow came on after or during a severe retching spell. I felt satisfied from the general condition of the patient that there had been no considerable hæmorrhage, and that most likely this fluid was either some water which had not been emptied from the cavity, or the immense pressure having been removed from the walls of the abdomen, some of the capillaries had possibly given away and were oozing. Nothing was done except to remove the soiled dressings, and then to have the tube aspirated every hour. This (Monday) morning there was hardly a dram of fluid that came out of the aspirator and the tube was removed. The patient has gotten along without any elevation of temperature (over 99°) without any acceleration of pulse, and no pain.

Dr. A. M. Vance: I would like to ask Dr. Roberts if the hæmorrhage did not come from separated adhesions rather than from a new bleeding point. I do not think it is uncommon for points where adhesions have been separated to bleed moderately.

Dr. W. O. Roberts: I do not believe that the hæmorrhage could have been due to the separation of adhesions because there was only one small adhesion. There was no evidence of loss of blood, and the hæmorrhage might have been stained water left in the cavity from the operation, and the strain from retching brought the water out. Or, possibly the sudden removal of so much pressure upon the abdominal vessels caused the capillaries to dilate and some of the weaker ones may have given away, hence this accumu-

h however was slight.

Selected Formulæ.

INTESTINAL ANTISEPSIS.

℞ Salol .....
Salicylate of bismuth.....
Bicarbonate of sodium..... } āā 150 grains.

Sig.—To be divided into 30 powders in capsules. One capsule to be taken before breakfast and before dinner.

—*Dujardin-Beaumetz.*

NASO-PHARYNGEAL AND LARYNGEAL SYPHILIS.

Dr. Griffin (*Deutsche med. Wochenschrift*, No. 1, 1892) praises the following formula in the treatment of the naso-pharyngeal and laryngeal manifestations of syphilis:

℞ Calomel..... 4 grams.
Powdered opium..... 2 "
Lime water.....375 "

This is used, according to the severity of the disease, either pure or diluted with equal parts of water, as a gargle in pharyngeal phenomena, as an irrigant in the nasal manifestations, and as a spray in the laryngeal symptoms. He has obtained excellent results with this formula.

INTESTINAL FLATULENCE.

CACHETS.

℞ Powdered nux vomica.....1 gram.
Powdered anise. .....2 grams.

Mix, and dispense in 10 cachets. One, twice daily, before meals.

MIXTURE.

℞ Columbo ..... } of each, 3 parts.
Ether spirit.....
Star-anise tincture ..... } of each, 1 part.
Nux-vomica tincture.....

Twenty drops before each meal.

—*Potain.*

PARACREOSOTATE OF SODA IN THE INTESTINAL CATARRHS OF CHILDREN.

Dr. Egaye (*Bulletin générale de Thérapeutique*, January 30, 1892) recommends the following formula:

℞ Sodium paracreosotate.....1-2 dgrams.
Tinct. of opium.....2-4 gtts.
Cognac..... .....1 gram.
Syrup of gum arabic.....5 grams.
Distilled water .....25 "

A teaspoonful every two hours.

PLANT'S ASTHMA CIGARETTES.

The *Pharmaceutische Post* gives the following formula for these cigarettes:

℞ Stramonium leaves.....8 parts.
Pulverized green tea leaves.....8 "
Lobelia leaves..... .....7 "

Mix, and moisten with a saturated solution of potassium nitrate. Dry thoroughly and preserve in hermetically sealed cans.

THE

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Leading Articles.

HYSTERICAL FEVER.

The varied and peculiar manifestations of hysteria always form an interesting study, and as they are apt to prove most discouraging to the attending physician, any light on the subject is acceptable.

Hysterical fever has for some time been a recognized form of the disease. This fever is manifest either as a continued or paroxysmal fever. The continued fever is analogous to the continued sensitive disturbance, such as anæsthesia; while the paroxysmal form correspondes to the more transient anæsthesia and hysterical convulsions.

Naturally both forms of hysterical fever can follow each other in a complicated form, as well as in a series of lesser hysterical attacks, interrupted by more severe attacks; just so it is possible that during the continued hysterical fever, attacks of paroxysmal fever may also occur. Under the nomenclature of true hysterical fever, only such cases should be included where the temperature does not exceed 38.50° C.

Dr. Athur Sarbó, in the *Deutsche Medizinal Zeitung*, describes a well developed case of hysterical fever which occured at the Psychiatric Clinic in Budapest.

The patient, who was a girl sixteen years old, fell ill nine months prior to her admission to the hospital. The disease originated in this way, the patient had suddenly been brought in sight of a corpse, without having been prepared for the shock. She immediately fainted. She then became cyanotic, and had severe clonic convulsions, which, however, ceased when consciousness returned, but recurred again once or twice a week. The father of the patient was a hard drinker, and a relative on the father's side was neurotic.

The condition at the time of admission wsa as follows: The patient was a well-

nourished woman; the pupils were large, the right slightly the larger, but both reacted well. The sight of the patient was limited, and the right ear rather deaf. On the right side of the nose the patient could not detect the odor of acetic acid. On the right side of the face as well as of the body there was a complete anæsthesia of the skin, and also an absence of any sensation of temperature. On the right side no active movements could be made, and the temperature of this side of the body was less than that of the right. No other abnormalities could be found.

During her one month's stay in the hospital, the patient suffered occasionally from dizziness and constipation. Now followed the stage of fever. On the morning of November 12th menstruation began, the patient having a temperature of 38.9° C, and immediately after was seized with an hystero-epileptic attack, lasting twenty-three minutes. The following day the temperature was 38.5° C, and on the next two days it was 39.1° C.

For two weeks these attacks continued in spitė of the liberal administration of quinine, antipyrin, phenacetin, etc. No enlargement of the spleen could be felt at any time; during the fever both pulse and respiration became accelerated.

Regarding the ætiology of hysterical fever, Chau-Neau is of the opinion, that it occurs either primarily, without any assignable cause, or else secondarily, as a reaction of the strained nervous system.

According to Sarbó, hysterical fever is characterized by the very fact that there can be no reasonable cause found for its presence. The manner of the beginning of hysterical fever, its sudden appearance and disappearance, and its attitude towards antipyretics in general, make its diagnosis comparatively easy. Another symptom, although not always present, is a very high pulse, and but little rise of temperature. The therapy should be directed towards the disease rather than the fever. Symptomatically, antipyretics may be given, but they accomplish little or no good. The expectant treatment is about the best after all. If the fever lasts for several weeks general stimulants should be given.

INTERNAL ANTISEPSIS

Oddities and novelties in medicine form not infrequently quite interesting reading. In these days of skepticism an exuberant amount of faith in any method is pleasing to see. So it is with interest that we read the *Medicinische Neuigkeiten's* graphic, yet almost humerous, account of Dr. Vopelius' "New Theraphy," which he has recently advanced or rather hurled upon the medical profession as a finished work—a laurel crowned invention—which is destined (according to Vopelius) to reform the entire practice of medicine. Our esteemed German contemporary seems inclined to take the whole thing as a bad joke especially in the face of the present almost nihilistic attitude of the profession.

The principle of the new therapy, is simple enough, consisting merely in a system of treating all diseases antiseptically by means of suitable remedies given internally. It is said that "harmless" antiseptics are suitable for the cure of "all" diseases. Those best adopted for the new treatment include creasote, for chronic diseases; creolin, for affections of the vascular system; and lysol, in parenchymatous disturbances. In cases of fever, antipyretics and in old cases, iodide of potassium should be administered as well.

Traumatisms, crushes, as well as simple and complicated fractures heal "without rise of temperature, and in the shortest possible time" under the influence of creolin given internally. The influence of

creolin given internally in erysipelas, phlegmons, carbuncles, catarrhs and inflammation of the joints was "truly startling." Without the use of any external remedies, other than the necessary surgical operations, the diseases, says Vopelius, will be cured "in as many days, as it formerly was weeks, by the old method." The most severe cases of pernicious anæmia (chlorosis) disappeared in eight or ten weeks after the daily exhibition of 5.0 grammes to 8.0 grammes of creolin. Severe cases of scrophula, suppurations of the bones, amyloid degeneration of the liver, spleen, and kidneys, all recovered within three months. Old leg ulcers healed up after four or five weeks internal use of creolin, without any local treatment whatever; chronic polyarthrites, with beginning deformities, recovered within six months. If in such cases creolin does not prove of sufficient potency by itself, then, "creosote is called into action, as heavy artillery, in order to completely route and vanquish the foe."

Still more astounding are the virtues claimed for lysol. "Scarlet fever, measles, typhoid and diphtheria are no longer to be feared with this remedy at our hand" says Vopelius confidently. Two cases of diabetis mellitus were cured, three still under treatment are greatly improved, as well as two cases of Bright's disease.

"The greatest and most wonderful success," says Vopelius in thick, fat type, "that I have achieved by means of my internal antisepsis, has been the extraordinarily favorable action of lysol in carcinoma. For the past six months, I have been treating five cases of carcinomatous diseases, including one case of rectal carcinoma (in which specialists had already determined to perform extirpation of the rectum) one of carcinominata of the liver and peritoneum, one mammillary carcinoma (which also was to have been excised) and one carcinoma of the uterus, with large doses of lysol, giving daily as much as ten grammes. All five cases have improved to such an extent, that to-day I regard lysol as an unfailing remedy against this worst enemy of the human body." The "unfailing" is rather prematurely used to say the least. "The diagnosis" says Vopelius, "becomes greatly simplified." Perhaps even superfluous, näivly adds the Editor of the *Medicinische Neuigkeiten*.

"Since the bacteria is the disease *par excellence*," then "the seat of the disease is no longer of diagnostic importance, but rather, the nature and propagation of the germs."

Under the chosen heading of "nervous," Vopelius classes such diseases as neurasthenias, dyspepsia, epilepsy, etc.; these, he says, have their origin in organic disease foci, old scars, dyscrasiæ, commencing parasitic growths,etc.," Diseases such as scrophulosis, tuberculosis, carcinosis, etc., are directly hereditary (not the predisposition),in that the most minute ovulæ of the respective microbes of these diseases are contained in the semen of the man or the ovum of the woman.

There is a deep satirical vein in the remarks of the *Medicinische Neuigkeiten*, when its editor highly commends Vopelius, who being "merely a country practitioner," and not a professor in some great University permits the results of his discovery to be published in a local medical journal instead of telegraphing the same to all the leading newspapers of the country.

Editorially we graciously decline from making any comment upon the discovery of "Internal Antisepsis," leaving our readers entirely free to form their own opinions. Yet there may be some good in it,wild and as absurd as the scheme may seem. Vopelius writes in sincerity and from undoubted conviction, and the day may come when this form of internal antisepsis may be looked upon as a valuable therapeutic method—stranger things than this have happened; and after all "he who laughs last, laughs best."

Correspondence.

TREATMENT OF HICCOUGH.

Editor of THE MEDICAL AND SURGICAL REPORTER:—In your number of August 20 you gave some attention to hiccough, having three short articles, two of which deal with Leloir's method of digital compression of the phrenic nerve. I have used this method, together with a modification of my own, for a year and a half and have never had it fail, even in obstinate cases. I compress each nerve with the thumb and fingers of each hand, near the sternal end of the sterno-cleido-mastord muscle. Since hiccough is due to spasmodic action, or clonic spasm, of the diaphragm the efficacy of this mode depends upon the production of an inhibitory state in the phrenic nerve, the motor nerve of the diaphragm. Compression alone has sometimes failed to produce suppression of the spasmodic action—probably owing to difficulty in securing *perfect* compression, especially in the right nerve which lies a little deeper than the left. Therefore I supplement compression by the following: make the patient take deep, complete, slow, rhythmic inspirations (about 12 or 14 per minute) followed by similar expirations. These slow, rhythmic movements seem to effectually afford supplemental aid to compression in combatting the quick, jerky, spasmodic movements of the hiccough. In fact, this method has always succeeded, even in the *few* cases in which compression alone failed.

This treatment is not only more efficacious than medication, which is so seldom effective but is, moreover, practically instantaneous, its effects being observed in from one to two minutes.

Very sincerely,

CHARLES M. BUCHANAN, M. D.,

Washington, D. C.

ELIXIR OF CASCARA SAGRADA.

Dr. Dujardin-Beaumetz (*Le Bulletin médical*, No. 10, p. 179, 1892) proposes the following formula for an elixir of cascara sagrada:

℞

Fl. ex. cascara sagrada	āā 90 grams.
Glycerine	
Essence of orange	vi gtts.
Essence of cinnamon	ij "
Alcohol	200 grams.
Simple syrup	400 "
Water, ad	1 litre.

A wineglassful after each meal. Useful in habitual constipation.

Periscope.

THERAPEUTICS.

CHLOROFORM IN THE TREATMENT OF TYPHOID FEVER.

According to the *Lancet*, Dr. P. Werner has treated 130 cases of typhoid fever with a one-per-cent. solution of chloroform, the employment of which was suggested by Behring's observations of the germicidal action of chloroform upon the bacillus. Werner gave a tablespoonful of the solution every hour or every two hours during the height of the disease and for some days after the temperature became normal. In all cases in which this treatment was adopted before the tenth day great improvement was manifested; the tongue did not become brown, diarrhœa and tympanites gradually disappeared, there was no tendency to bed sores, and relapse was very rare. His observations agreed with those of Steppe, who used the drug in 1890 in this disease. Possibly we may have in this a desirable substitute for the so-called Brand treatment, of which Osler says in his recent work: "To transfer a patient from a warm bed to a tub at 70° F., and to keep him there twenty minutes longer in spite of his piteous entreaties, does seem harsh treatment, and the subsequent shivering and blueness look distressing. A majority of our patients complain of it bitterly, and in private practice it is scarcely feasible." —*N. Y. Med. Jour.*

ELECTROSTATIC TREATMENT OF STRANGURY.

Benedikt (*Wien. med. Presse*, No. 27, 1891) gives notes of two cases of strangury that were quickly relieved by applying the electrostatic douche and sparks to the spine and hypogastrium. Previous treatment had failed to ameliorate. Case I was tabes of long duration, strangury being the most distressing symptom. Relief of this condition was increased by each application. In case II the affection followed an operation for hæmorrhoids many years before. Immediately after the first sitting the number of nocturnal micturitions sank from twenty-five to nine. A fortnight's treatment reduced the abnormal state to a minimum. More recent successful cases lead him to view this therapeutical means as a specific.—*Brit. Med. Jour.*

FURTHER OBSERVATIONS ON EXALGINE.

Our knowledge of the therapeutical action of this, the latest addition to the invaluable series of analgesics, is gradually being extended. There are already very favorable reports by various competent investigators in the treatment of various neuralgic manifestations, and Dr. Gordon, of Aberdeen, contributes a further series of observations which seem to show that in doses not exceeding from four to six grains exalgine may be relied upon to relieve the pain in lumbago, intercostal and facial neuralgia, and similar painful manifestations of a neurotic type. In locomotor ataxy it abolished the formidable "lightning pains," and even the pain of rheumatoid arthritis, in a certain proportion of the cases, proved amenable to its analgesic action. Dr. Churton, of Leeds, on the other hand, contributes some interesting notes of a case of Graves' disease in which small doses of exalgine not only relieved the painful ocular symptoms, but determined the immediate subsidence of the local congestion. The genuineness of the effects thus produced was controlled by critical observations carried out with other remedies, all of which utterly failed to afford the relief which invariably followed the exhibition of exalgine. Dr. Churton's observations lead him to conclude that exalgine is in no sense a "cumulative" drug. In one case three eight-grain doses, equal to twenty-four grains, were taken within half an hour without giving rise to any symptoms beyond a feeling of being "dazed," with dryness of the mouth and fauces. This fact is interesting in view of the somewhat alarming effects occasionally reported as having followed even small doses.—*Med. Press.*

THE VALUE OF OPIUM IN MELANCHOLIC STATES.

At the meeting of November 27th, 1890, of the Netherland Psychiatric Society at the Asylum in Utrecht, Holland, the value of opium in melancholic states was discussed. Dr. Winkler sets forth two conditions in which opium is of value. (1) In anxious states; indeed, the writer has often succeeded in aborting these conditions by means of large doses of opium. (2) In alternating psychoses with insomnia; here small doses act best. Dr. van Parsijn would not be without the remedy. He has seen several cases of melancholia where the remedy gave good and lasting results; these were chiefly recent cases where the action was striking. He never uses morphine in such cases, but prefers opium. Dr. Doedes Breuning finds that the use of opium in the Dutch asylums is greatly decreasing. Dr. van der Sith would limit the use of opium to acute cases. He quotes Schroeder van der Kolk, who used it only in pure melancholia.—*Psychiatrische Bladen*, Deel IX, Afl. 1.

DIGITALINE.

Fouquet, in his study of digitalis, claims that it contains a well-defined, active principle possessing the valuable properties of the plant; the other constituents, which are less active, are sometimes sold under the name of digitaline. The following classification is made of the digitalines:

1. Digitaline soluble in chloroform and insoluble in water—crystalline digitaline, amorphous digitaline, digitoxine digitaline.

2. Those insoluble in chloroform and soluble in water—German digitaline, digitalein.

Of the above, only those of the first group should be used in medicine, preference being given to the crystalline digitaline.

He further concludes that digitaline should not be administered in granules, but advises it to be prepared in a standard solution made with glycerine, alcohol and water, each c. c. to contain one milligram of digitaline.

In addition to this, we may say that the varieties which have received the greatest amount of notice, are Homolle's amorphous digitaline, Nativelle's crystallized digitaline, and the soluble or German digitaline. Schmiedeberg claims there are at least five principles present in it, as well as the possibility of some products of decomposition. They are all nitrogenous, and with the exception of one *digitoxin*, are glucosides. "They are *digitoxin*, *digitalin*, *digitalein*, *digitonin* and *digitin*. The first three are cardiac poisons, digitonin acts like saponin, and digitin appears to be inert.

"Digitoxin is insoluble in water and forms the chief constituent of Nativell's digitaline. Digitalein differs from the two former in being readily soluble in water, and forms a large proportion of the soluble digitalin."

ARTIFICIAL PRODUCTION OF ABSCESSES IN PNEUMONIA.

L. Bard (*Lyon Mèd.*, April 17th, 1892) reports a third case in which the artificial production of an abscess by the subcutaneous injection of essence of turpentine see (*Epitome*, March 12, 1892, par. 223, and April 23rd, 1892, par. 370) in a bad case of pneumonia was followed by resolution and ultimate recovery. The patient was a man, aged 49, who had been suffering from pneumonia of asthenic type for nine days. As there was no appearance of resolution, and the patient was very weak and was steadily losing ground, three-fourths of a cubic centimetre of essence of turpentine was injected into the arm. The temperature fell the same evening, rising again the next morning in response to the local inflammatory reaction following the injection, and then gradually falling to normal. The patient's general condition showed marked improvement as soon as the suppurative process began, resolution took place, and the patient left the hospital completely cured. Bard points out that the case shows that the method is unattended with danger; his patient was in a state of grave adynamia with albuminuria and extensive atheroma of his arteries, yet no untoward effects followed the injections.—*Brit. Med. Jour.*

SOLANINE IN PAINFUL DISEASE OF THE STOMACH.

At a meeting of the Paris Academy of Medicine on March 22nd (*Sem. Méd.*, March 23rd, 1892), Desnos read a paper in which he recommended solanine as a useful substitute for morphine in painful diseases of the stomach. The drug is in a general way inferior to morphine, but it sometimes succeeds where the latter has failed, and it is likely to be of use where morphine is not well borne, or where the establishment of the moprhine habit is feared. Desnos has used solanine in a large number of stomach affections—gastralgia, dyspepsia accompanied by pain, alcoholic gastritis with or without dilatation of the stomach, etc. In a case of ulcerated gastritis with hæmatemesis, in a case of old gastric ulcer, and in some of cancer of the pylorous with vomiting, the painful symptoms quickly disappear under the use of solanine. Desnos gives the drug in pills, hypodermic injections causing too much pain. The usual dose is is 5 centigrammes given half an hour before meals; when the pain is very acute, solanine may advantageously be given in a gummy solution. The total amount given in the twenty-four hours never exceeded 15 centigrammes.—*Brit. Med. Jour.*

A TREATMENT OF SHOCK.

In the *Correspondenzblatt für Schweizer Aerzte*, 1891, No. 24, S. 745, Dr. A. Kottmann gives the details of the transfusion of salt water in the left cephalic vein to the amount of twenty-four ounces with a transfusion syringe. In cases when anæsthesia during shock is necessary he recommends ether instead of chloroform for this purpose. In cases of collapse, especially in pyæmic conditions, he combines these two method with success, operating under ether anæsthesia, and hoping, through the transfusion of salt water, to prevent shock, and as well to free the tissues from the poison. He cites successful cases in support of these methods of procedure.

STRYCHNINE IN INEBRIETY.

Dr. R. M. Phelps, First Assistant Physician to the Second Minnesota Hospital for Insane, gives in the *Hospital Bulletin* the following results of a series of investigations into the use of strychnine in inebriety:

1. Nitrate of strychnia, taken steadily in large doses, has a tendency, first, to impair the appetite for liquor; later, to make liquor an incompatible or sickening agent for *the time being*.

2. The systemic effects of nitrate of strychnia seem to be not injurious. Yet I would be far from advising any private or injudicious use.

3. Chloride of gold and sodium was only given in small doses the last five days of the twenty-one, and it is only mentioned here because it seemed to bring out a positive sickening effect in several who had before only a feeling of *indifference*.

4. The systemized methods of administration are important, because the physician is dealing with remedies in doses to be recommended only under close supervision.

MEDICINE.

THE PRODUCTION OF HEAT IN FEVER.

For many years a controversy has been carried on as to the cause of the rise of temperature in fever, one school arguing that such rise depended on increased oxidation, while the opposite school, of which Traube may be regarded as the exponent, considered the rise to be due to the retention of heat—that is, to a diminished discharge of heat by the body. With the view of settling this question, Professor Rosenthal (*Berlin. klin. Wochenschr.*, August 10, 1891) has recently, with the aid of his air calorimeter, carried out a research on the lower animals, using especially rabbits, in which pyrexia was caused by the injection of phthisical sputum, infusion of hay, etc. The result showed that the discharge of heat from the body was diminished, while the temperature was rising, Traube's view therefore being confirmed. The next point whsch Rosenthal set himself to investigate was whether during the onset of fever there was any increased production of heat, or whether the rise of temperature might be wholly due to diminished loss. The calorimetric experiments failed to supply any evidence of increased production of heat; in short, the rise of temperature appeared to be wholly due to diminished discharge of heat. Rosenthal is careful to limit the above conclusion to the animals under experiment (that is rabbits), in which pyrexia was produced in the manner indicated. A broader generalization must await further investigation. Nevertheless, a number of observations have already been made on sick persons in state of fever, and the evidence obtained, although not yet complete, points in a similiar direction, as stated above.—*Brit. Med. Jour.*

CROUPOUS RHINITIS.

M. Hunt reported a case before the British Laryngological Association. The initial symptoms were profuse, serous discharge from one nostril, with marked obstruction. Slight rise of temperature, 100° F.

The occluded nostril was lined with thick, white membrane. The mucous membrane of opposite side swollen and congested but without deposit. The deposit was removed easily, leaving a raw surface that bled slightly. The following day same deposit found in nostril, also on surface of faucial tonsils. The latter did not bleed on removal of exudate.

After removal, the denuded surface was brushed with sol. of argent. nitrat. (twelve per cent). The membrane disappeared fifteenth day from commencement of attack, and was followed by free mucopurulent discharge, lasting for ten days.

By microscope, the exudate consisted of basement of fibrin, fibrillous and granular, leucocytes and epithelial cells.

The absence of any nasal traumatism, of constitutional disturbances, of renal symptoms, and of diphtheria in surroundings, is the warrant for the diagnosis.

HEMIPLEGIA AFTER DIPHTHERIA.

Auerbach (*Deutsch. med. Woch.*, February 25th, 1891) reports the following case: A girl, aged 7, had extensive diphtheritic membrane on the tonsils and soft palate. On the eighth day of the disease the speech had a nasal twang, on the twelfth the urine contained albumen and casts, and on the fourteenth there was œdema about the eyelids. On the twelfth day the patient had convulsions for ten minutes, followed by coma, which lasted during the following night. There was almost complete anuria, but no vomiting or dyspnœa. The pulse was tense. The next day there was complete left hemiplegia, including the face, together with difficulty of speech, which latter passed off in a fortnight. The patellar and superficial abdominal reflexes were absent on both sides for a week. By the twenty-eighth day the œdema, which had been considerable, diappeared. In the seventh week the patient could lift the left leg about half as high as the right, and in the ninth week the arm began to improve. The recovery, though considerable, remained incomplete. The intelligence was unaffected. The author says that the hemiplegia was due to cerebral hæmorrhage, the onset excluding embolism, and that there were symptoms present in this case independent of the cerebral lesion, namely, paralysis of the soft palate, disturbance of co-ordination, and loss of reflexes. Auerbach then refers to the vascular changes found in the infective diseases and would attribute the

hæmorrhage to this fact, combined with the increased vascular tension brought about by the renal affection.—*Brit. Med. Jour.*

DILATATION OF THE CHEEKS IN GLASS-BLOWERS A CAUSE OF DISEASE.

According to *Le Progrés Mèdical*, the Sociétè de Biologie, of which M. Brown-Sequard is president, received from M. Regnault, of Marseilles, at its session on November 7th, 1891, a communication on a disease which is met with in about one third of the workmen. This condition does not attain complete development until the men have been from ten to fifteen years at the business. They are taken into the glass factories, usually, about fifteen years of age; and at first the young workmen complain of great fatigue and a painful feeling in the cheeks which extends to the ears; later, the cheek becomes gradually weakened, is easily puffed out, and the deformity, of which the cases presented were in an advanced stage, progresses steadily. This deformity is caused principally by the weakness of the buccinator muscle, whereby the cheek becomes swollen and permanently enlarged.

The swelling is limited by the masseter muscle. There is also a special dilatation of the duct of Steno, the calibre of which is increased and the orifice enlarged. This duct is filled with air, which may be forced out by pressure on the external surface, when a distinct gassy sound is heard.

The functional symptoms are inconsiderable. It happens very rarely that food is detained a moment between the cheek and the dental arch. There is no pain attending it, nor any disturbance of the salivary glands. Sometimes there is a thickening of the epithelium of the mucous membrane of the cheek.

RELATIONS OF ALBUMINURIA TO PSYCHOSES.

In an article on this subject Dr. Raymond says that the albuminuria present in mental disease, is either dependent upon the affection of the nervous centers, or is due to disturbance in the renal function, in which case it may become the direct cause of mental ailment; sometimes a relapse of the latter may go hand in hand with a return or increase of the albuminaria. In alcoholists the amount of albumin in the urine varied with the intensity of the delirium, and it often occurred in the delirium of alcoholism, when, in the case of death of the patient, no affection of the kidney could be found. In other forms of mental disease albuminuria is met with principally in the acute stage; frequently a certain relationship between the degree of the delirium and that of the albuminuria is noticeable. Upon administration of digitalis the œdema disappears, the albumin in the urine is increased, and the delirium passes away. The albuminuria, therefore, brings about a poisoning of the system, which, under certain circumstances, gives rise to the development of or causes an increase in the psychical disturbance. In the course of chronic nephritis delirium, simulating insanity, may occur with the uremic intoxication. The cases reported by the author illustrate this. The maniacal excitement, combined with religious and erotic delusions and hallucinations, occurred in individuals having no hereditary disposition during attacks of uremia of chronic nephritis. Dieulafoy calls this disease "folie brightique." The treatment of these cases does not consist of the application of the cold douche, nourishment, etc., but must be directed towards the affection of the kidney; exclusive milk diet.—*Centralblatt f. klin. Medicin.*

NOTES ON PRICKLY HEAT.

Dr. J. A. Wetherell, writes in the *Lancet*: Under the term "lichen tropicus" must be embraced three primary lesions, in frequency taking the following order:—1. A vesicular eruption, the vesicle, of the size of a pin's head, elevated on a roseolous, inflammatory base, being filled with colorless perspiration; sometimes arranged in segments of rings, at others diffusedly spread. On a superficial examination, it resembles much the efflorescence of measles or scarlatina, and occurs principally on the nape of the neck, the flexor surface of the forearms and legs, and the front of the abdomen. Even habitants for many years of semi-tropical regions are apt to exhibit this form, especially those who wear woolen underclothing. 2. A wheal with a red surrounding halo, accompanied by intense itching, which induces the sufferer to scratch off

the covering cuticle, causing the erythematous effusion to develop a blood-scab. Its characteristics are shown on the backs of the hands and about the ankles, and may be mistaken for mosquito bites. 3. A coppor-colored papule of largish dimensions, on whose surface after twelve hours may or may not appear a pustule. The front of the throax exhibits this best. The older pathology which regarded prickly heat (lichen tropicus) as a papular eruption, and the more recent, as vesicular—hence termed "miliara dapulosa"—are both partially correct, but also erroneous, inasmuch as they recognize a single lesion. The treatment of all consists in washing the affected parts frequently with superfatted menthol, euclyptol, or phenol (20 per cent.) soap, allowing the rubbed-in foam to dry, then mopping on with a soft linen rag this lotion: liquor plumbi subacetatis, liquor carbonis detergens, and glycerine, of each one ounce; rectified spirit of wine, three drachms; oxide of zinc, two drachms, to a pint of water; or smearing with the following ointment: vaseline, two drachms; lanoline, two ounces; liquor carbonis detergens, two drachms; oxide of zinc, one drachm; menthol, twenty grains. If of limited extent, a bismuth and zinc powder may replace these. Cotton underclothing should be adopted and frequently changed.

SURGERY.

IRREDUCIBLE DISLOCATIONS OF THE GREAT TOE AND OF THE THUMB, TREATED SUCCESSFULLY BY OPERATION.

Lloyd (*Lancet*, London, February 27, 1892) describes an operation for irreducible dislocations of the thumb and great toe, with a report of two cases.

The first case was a backward dislocation of the toe, the result of a fall from a horse. Attempts at reduction were made, but without success. An incision, two inches long, was then made, with its centre over the head of the metatarsal bone. The head of the bone was found thrust petween the heads of the flexor brevis pollicis. The anterior ligament, with the sesamoid bones, was torn away and had "shut back" behind the rounded head, constituting the chief if not the entire obstacle to reduction. The anterior metacarpo-phalangeal ligament was divided freely, freeing the sesamoid and permitting easy reduction. The wound between the ligaments and muscle was closely sutured, and the wound dressed antiseptically. The patient was about his work in a few weeks, and suffered no incouvenience.

The second case was a backward dislocation of the thumb, the patient presenting himself three months after the injury. A similar operation, as above described, was performed, and with a like result.

Lloyd advances several theories as to the cause of irreducibility. The one most generally accepted, is that the bone is tightly grasped by the two heads of the flexor brevis pollicis. A point of great importance lies in the fact that the head of bone pushes its way through the muscle, above the level of the sesamoid bones; the anterior metacarpo-phalangeal ligament being torn from its metacarpal attachment, these two structures, which are closely incorporated, "shut back" behind the protruding head and become closely applied to the anterior part of the articular surface of the displaced phalanx. The "shutting back" of the structures is due partly to their own elasticity, and partly to the pull of the short muscle; of the thumb and toe. In rare cases of dislocation of the thumb, the long flexor tendon gets between the ends of the bones. *Lloyd* thinks that excision of the joint, in these cases of dislocation, is necessary.—*Univ. Med. Mag.*

COMPOUND DEPRESSED FRACTURE OF THE SKULL, WITH VERY EXTENSIVE LACERATION OF THE BRAIN AND HÆMORRHAGE FROM THE SUPERIOR LONGITUDINAL SINUS.

By Dr. Bensel. Patient, thirty-eight years of age, was struck on the forehead with a heavy beer glass. Lost consciousness for a few moments only, then recovered sufficiently to walk. Was transferred to hospital. On admission was perfectly conscious, but very nervous and irritable. Pulse slow and full; pupils dilated; skin warm and dry; respiration normal. Extensive sub-conjunctival hæmorrhage, so that patient could with difficulty close the eyelids. A wound, two inches long, extended transversely across the middle of the forehead immediately above the supraciliary ridges, with extensive depressed fracture. Patient refused consent to operation until next evening, when sub-con-

junctival hæmorrhage had become so great that it was impossible for him to close his eyelids over the protruding eyeballs. The depressed portion of bone was found to be almost completely detached from the surrounding bone, and depressed for about half an inch, tearing the meninges very extensively. The removal of the detached bone was followed by a tremendous hæmorrhage from the superior longitudinal sinus. Author used the sliding catch of a Langenbeck artery clamp as a lever to control the hæmorrhage. There was a laceration of the frontal lobe of the brain on the right an inch and one-half deep, and one on the left nearly half an inch deep. Wound packed lightly with bichloride gauze; dressed and bandaged in the usual way. Patient made an incomplete recovery. —*New York Med. Jour.*, Jan. 16. 1891.

ANEURISM OF THE RENAL ARTERY.

Oestereich (*Berlin klin. Wochenscher,* 1891, No. 42.) publishes two cases of aneurisma arteriæ renalis:

1. Sacculated aneurism of a branch of the left art. ren. located inside the kidney. Dilatation and tortuosity of numerous branches of both renal arteries (particularly the left) in a case of endarteritis chronica deformans. Breaking through of the aneurism into the renal pelvis; rupture; death from hæmorrhage.

Patient was a woman æt. fifty, who had commenced to bleed from the genitalia fourteen days before death.

2. Sacculated aneurism art. ren. dextr. attached to the trunk of the vessels outside of the kidney. Patient a young man.

No symptom of aneurism during life.

According to Oesterich the local semiology of renal aneurism is:

a. The tumor. Aneurisms of a certain size easily palpated, eventually pulsating, lying behind the colon as a tumor. This is the most certain diagnostic sign of renal aneurism.

b. Auscultatory findings, systolic or diastolic gassy bruit.

c. Hæmaturia appearing first when perforation occurs into the renal pelvis.

d. Pain inconstant.

1, Renal calculus; 2, Renal tumor; 3, Renal rupture; 4, Hæmophilia renalis.

Prognosis bad, because the uncomplicated outcome of renal aneurism must be inevitable hæmorrhage.

THE OPERATIVE TREATMENT OF PERICARDITIS.

At the meeting of the (*Berlin Medical Society*, Jan. 6. 1892,) Dr. Kœrte reported a case of pericarditis which he had cured by operative measures. The patient, a girl aged seven years, had developed the disease as the result of osteomyelitis of both tibia. Aspiration of the fifth intercosal space furnished thin pus rich in staphylococci. The operator resected a portion of the fifth rib. 5cm. in length, opened the pericardium, evacuated about one litre of a thin purulent fluid. Although the heart was exposed by the incision, no disturbance of its function was observed, even after the pericardial sac had been thoroughly irrigated with a disinfectant fluid. The patient died twelve days after operation of cardiac failure. The autopsy demonstrated a number of pus channels in the left ventricle, some of which communicated with the pericardium, the posterior papillary muscles had been destroyed and the anterior was infiltrated with pus. It is probably that in this case abscesses first formed in the heart muscle, which ruptured into the pericardial sac and produced a pericarditis.—*Wien. Medizin. Presse.*, No. 5, 1892.

HERNIA, OPERABLE AND INOPERABLE.

Thos. H. Manley, in a paper on this subject, submitted at the late meeting of the American Medical Association, concluded as follows: Although, during the past fifteen or twenty years, very much has been written on hernial operations; much in America, but more in Europe, so far as can be learned from current literature, no one has yet made an attempt in a methodical manner, in any brochure of or treatise published, to systematically describe and classify those herniæ which are operable and those which are not. For the purpose, of at least in part, filling in this void, this essay is offered.

In epitomizing the subject and considering the question of treatment of hernia, in a general way, it may be said with something approaching definite certainty:

1. That, inasmuch as no operative techinique yet devised, or even can be, will always effectually remove the courses of any species of hernia; in consequence of this a permanent, enduring cure is quite out of the question, in certain cases.

2. The radical cure of hernia may be regarded as one of the most satisfactory operations in general surgery. The fact that the disease often relapses constitutes no valid objection against surgical intervention; for this is commonly the case in the major part of operations performed on the human body.

3. A radical operation for a non-strangulated hernia, which gives no serious inconvenience, is not a justifiable procedure and should not be encouraged, unless there are pressing reasons for it, as the presence of a neoplastic formation in the sac; or this latter is occupied by an ovary, or some other viscus.

4. Hernial operations should not be performed in extremes of age. In early life there is seldom pressing necessity for them. In very advanced age the risk, immediate or remote to life or death, involved by operation more than compensates for the prospective benefit.

5. Unless there are specially contra-indicating factors in given cases, inguinal hernia should always be treated by radical operation in women, which, with them is so often attended by a permanent cure.

6. As a rule, all operations on reducible or incarcerated herniæ are radically curative, though the disease commonly relapses; nevertheless, the immediate dangers of strangulation have been removed and the hernia has been placed in position to be more comfortably borne by a truss.

7. Every operation for strangulated vaginal or femoral hernia should always include such additional steps, as will effect thereafter an obliteration of the canal without undue pressure on the tubular structures passing through it.

8. Very large, old herniæ, in any of the abdominal regions are not operable, except in the event of strangulation, as their sudden return is often attended with mortal consequences.

HYPERÆSTHESIA OF THE CRANIAL BONES.

Benedikt (*Intern. klin. Rundschu,* No. 1, 1892) remarks on the importance of examining the cranial bones for undue sensitiveness, as a proceeding analogous to testing for spinal tenderness. He describes a form of caphalalgia in which pain and tenderness are confined to the cranial sutures. He has found this "suture neuralgia" in persons subjected to prolonged worry and overwork, in some nervous disorders such as Basedow's disease, and in persons at the age when the sutures are ossifying. He cites the case of an overworked youth, aged 19, in whom convulsions suddenly developed and quickly ended in death. Hæmorrhagic pachymeningitis was diagnosed, but the chief necroscopic discovery was acute synostosis of the cranial sutures, proceeding from within outwards. In a man, aged 51, affected with atrophy and paralysis of the left half of the tongue, paresis of the right labial muscles, formication in the right arm, and occasional speech troubles, Benedikt discovered great hyperæsthesia of the left half of the base of the skull, including the accessible portion of the orbital roof, and the left half of hard palate. Taken with the other symptoms he was inclined to consider this hyperæsthesia as a pathognomonic indication of bulbar affection. Unilateral hypersensitiveness of the cranial base is often present, he finds, in old standing migraine.—*Brit. Med. Jour.*

OBSTETRICS

THE CHOREA OF PREGNANCY.

In an article upon this subject (*International Medical Magazine*, July, 1892), Dr. Lloyd, of Philadelphia, gives the prognosis as follows: Very practical questions are involved in the prognosis both to the mother and the child. Some years ago an English obstetrician, Barnes, wrote a paper on all the cases of the chorea of pregnancy that he could find in medical literature. His statistics seem to prove that about seventeen out of fifty-six are fatal. I think that this is an over-estimate, for this reason: It has happened in the past that only the fatal or the severe cases have been reported. I have seen five cases of the chorea of pregnancy, none of which have been fatal. Milder cases are not apt to get into print. I think that, while the chorea of pregnancy is a grave disease, it is not as grave as Barnes's statistics seem to prove. Another question comes up—the prognosis in the case of the child. Statistics have also proved that some of these women go into premature labor, and that some of these children are still-born

or die shortly after birth, probably because of the premature labor or because of the mother's reduced condition. A very practical question which you will have to face is, whether or not you shall bring on premature labor or even abortion. Many of these cases of chorea in pregnancy certainly recover after labor, but a small proportion do not, and on that account it is difficult to advise when premature labor should be induced. When the woman's life and the babe's life are in jeopardy it is justifiable, even imperative, to act. I think that after seven months in some cases, the chances for the babe's life may be better if taken from the mother. Recollect, however, that women do not all recover after confinement, and that the child does not always live.

POST-PARTUM HÆMORRHAGE.

How to prevent this formidable complication of labor, and how to check it when once the flood-gates have burst open are problems of the greatest importance to every practitioner throughout the land. Although one reads a good deal of it in text-books on obstetrics, it is fortunately by no means common, at any rate in its severer forms. Many a practitioner with extensive experience of the lying-in room has never met with a fatal case, and the records of over 11,000 labors at one of the London hospitals show only one fatal instance of post-partum hæmorrhage. In cases of moderate severity almost any of the means usually resorted to will suffice to excite uterine contraction, and so put an end to a condition full of danger for the woman, and full of anxiety for the medical attendant. The question is really what can be done to goad into activity the typically inertia-stricken uterus. Shall we pack the uterine cavity full of gauze as a last resort, or shall we content ourselves with temporarily arresting the outpour by manual pressure? To pack the uterus tightly enough to exercise efficient pressure on its walls is a task which few would care to attempt, while the ever-present danger of introducing pathogenic organisms from without cannot be overlooked. We have a shrewd suspicion that the cases in which success has followed the more radical measures would have proved amenable to milder treatment if persevered in.—*Med. Press.*

ACTION OF HYDRASTIS CANADENSIS ON THE UTERUS IN THE PUERPERAL STATE.

Bordé (*Rif. Med.*, February 25th, 1892) gives the results of his experience with hydrastis and its preparations. As regards hydrochlorate of hydrastine, he finds that (1) it has no action on the physiological loss of blood during and immediately after labor; (2) it has no influence on the involution of the uterus during the puerperium; (3) it has very little influence on the lochia, its action, if any, being to cause (*a*) greater persistence of the red lochia, (*b*) delay in the expulsion of clots, (*c*) greater fætor of the lochia; (4) it does not assist the expulsion of clots and other bodies contained in the uterus. As regards the extract of hydrastine, he concludes from observations on twenty-five normal labors in which the drug was given in large doses during and for ten days after delivery that, if this drug has any action at all on the uterus in the puerperal state, it is to diminish the activity of its reaction and contraction, and therefore to increase both the loss of blood and the subsequent troubles. Finally, he gives it as his experience with the drug, in a few cases of non-puerperal uterine hæmorrhage, that it always failed.—*Brit. Med. Jour.*

GYNECOLOGY.

EXPERIENCES IN THE OPERATIVE TREATMENT OF RUPTURED TUBAL GESTATION.

A. Gusserow (*Berlin. klin. Wochensch.*, No. 22) relates briefly twenty cases which have come under his care, and enunciated his views regarding the course of tubal pregnancies, as follows:

(I) Rupture of the tubal sac which may be either a sudden bursting of the tube or it may follow the formation of a small opening in the wall through the destruction of the tissues by the growth of the chorionic villi. This form of rupture may lead to the following condition:—

(1.) Free hæmorrhage into the abdominal cavity always attended with a fatal result if not relieved by operation.

(2.) To slight free hæmorrhage which it is conjectured occurs in drops, becomes encapsulated and leads to secondary hæmatocele.

(3.) The hæmorrhage may occur be-

tween the folds of one of the broad ligaments, and lead to hæmatoma of the ligamentum lata.

(4.) The hæmorrhage may occur into the lower part of the peritoneal cavity, after this has been shut off by previous adhesions from the rest of the abdominal cavity forming what is known as primary hæmatocele.

II. The ovum through contraction of the tube may be expelled through the abdominal opening and the conditions described under 1, 2, and 4 may obtain.

III. The ovum *in situ* may undergo death through hæmorrhage into the decidua and form what is known as a "flesh mole" which (1) may shrivel and remain as a small hard swelling behind the uterus, or (2) may lead to the conditions described under I. from fresh hæmorrhages into the tubal canal.

Thirteen of his cases belonged to group I- and all ended in recovery excepting one. The remaining seven cases were done for secondary hæmorrhage occurring in hæmatocele. Theoretically he is in favor of doing a laparotomy at once in every case of extra-uterine pregnancy when the diagnosis is certain but this *proviso* does not frequently obtain, hence the majority of cases cannot be operated upon until after rupture.

DEATH FROM RETROFLEXED AND INCARCERATED UTERUS.

Treub (*Nederl. tijdschr. v. Verlosk en Gynäkol.*, Jahrg. iii., No. 3) reports a fatal case of incarcerated, pregnant uterus. The post-mortem revealed gangrene of the colon, followed by acute peritonitis. He has collected fifty cases of death from this cause, and in none of them except his own, was gangrene of the intestine a cause; 13 perished of uræmia, 11 of rupture of the bladder, 6 of sepsis, 10 of peritonitis followed cystitis, 3 of pyæmia, 2 of rupture of the peritoneum, and 5 of accidents accompanying an effort to replace the uterus. Gangrene of the intestine is, therefore, an unusual cause of death in this condition.

PEDIATRICS.

EXOPHTHALMOS IN AN INFANT.

Dr. Philipsen (*Annal d'Oculist*, December, 1891) saw an infant of ten days with a pronounced displacement of the right eye forward and downward. It had been noticed two days after birth. A smooth, rounded tumor could be made out within the orbit, fluctuating, and painless on pressure. Without treatment this disappeared gradually and the eye regained its natural place, and three months later showed no signs. The diagnosis was cephalæmatoma, developed either between the periosteum and the orbital vault and between the dura mater and the vault, and having penetrated into the orbit by a congenital communication.

DIPHTHERIA AND CROUP.

The science of bacteriology has already opened a floodway of light upon many obscure problems in the ætiology of disease; and evidence is not wanting as to the practical application of the information obtained from this source. While perhaps not yet absolutely proved, there is abundant testimony, clinical and otherwise, pointing to the identity of the two processes, diphtheria and croup. Partly in consequence of early teaching, partly because the evidence is not conclusive, there is still a minority that maintains the individuality of the two affections. One of the most conclusive clinical arguments of their identity is afforded by the fact that in some of the large Continental hospitals cases of croup and diphtheria are placed side by side in the same ward, and the cases of croup do not become infected; while it is not rare for diphtheria to develop in a family in which an apparent case of croup has been present.

The almost general acceptance of the dictum of identity is indicated by the tendency to treat cases of croup as though they were diphtheric, and the instructions of Boards of Health that cases of croup be reported. Fraenkel (*Deutsche medicin. Wochenschr.*, No. 24, 1892, p, 564) has added an opportune and valuable contribution to the controversy. The opportunity was afforded him of holding autopsies in four cases, all clinically typical instances of croup. In none were the subjective or objective evidences of pharyngeal involvement present. All presented hoarseness and marked difficulty in breathing. In two, tracheotomy was performed. The autopsies confirmed the freedom of the pharyngeal structures. In one case the membrane was situated below the glottis.

Examination of the membrane present in each case disclosed the presence of the bacillus of diphtheria described by Klebs and Loeffler, the identity of which was absolutely assured by its morphologic appearances, by its behavior in culture, and by its pathogenicity to animals. It is true that the number of cases reported is small, but the evidence adduced is positive and conclusive, and not to be controverted by any negative evidence.

Investigations by Middeldorpf and Goldman (*Deutsche medicin. Wochenschr.*, No. 24, p. 570) have disclosed the identity of the pathologic processes in croup and diphtheria. In both there occurs an intense inflammation of the mucous membrane, leading to destruction and desquamation of epithelium. Abundant exudation takes place, with subsequent coagulation and the formation of membrane.—*Medical News.*

THE ÆTIOLOGY OF APHTHOUS STOMATITIS.

Ollivier (*Revue Mensuelle des Maladies de l' Enfance*, 1892, No. 1, p. 11) adduces some new observations in support of the view that the milk of cows and goats suffering from aphthous fever is capable of producing an aphthous stomatitis in persons who drink it. He does not deny that aphthæ may result from a simple herpetic eruption or from a local irritation; but he insists that distinct manifestations follow the drinking of infected milk. This view was originally suggested in 1765, by Sagar, who observed an epidemic of the disease among the monks of a Franciscan convent, where the principal article of diet was milk derived from a herd of cows at the time affected with aphthous fever. The observations of other writers, which tend to further corroborate this view of thei-ætiology of the disease, are discussed in detail. Bacteriological studies by Fränkel have shown the presence of the staphylococcus pyogenes citreus of Passet and the staphylococcus of Rosenbach; but neither of these organisms has a specific importance. In man, and especially in the case of children, the disease is absolutely without danger. Demme has reported one fatal case, and Fränkel records three or four. Prophylactic measures are, therefore, important; and when several cases occur among a number of children fed upon milk from a common source of supply, the milk should be well boiled; or, better, perhaps, a new dairy should be sought.—*Amer. Jour. Med. Sci.*

HYGIENE.

RELATIVE VALUE OF GERMICIDAL CHEMICALS.

As the germ-destroying agents given below are the results, recently obtained (*Am. Drug.*) by the Health Department of New York City, they may be relied upon as accurate and conclusive. They rank in effectiveness as follows:

Corrosive sublimate, 64 grains to the gal.

Carbolic acid, 5 per cent. solution.

Bromine, 1 pound to 200 gals.

Permanganate of potash, 7¾ ounces to 200 gals.

Chloride of lime, 4 ounces to the gal.

Sulphate of iron, 1½ pounds to the gal.

Sulphate of zinc, 4 ounces to the gal.

Common salt, 2 ounces to the gal.

Two semi-officinal deodorant solutions are also spoken of—*Liquor Zinci et Ferri* for domestic use where iron is unobjectionable, and *Liquor Zinci et Aluminii Compositus* for disinfecting clothing, etc.

ROAST AND BAKED MEATS.

A writer in the *Lancet* says that the adoption of the closed range has to a great extent caused the abandonment of the method of roasting our meats before an open fire, and substituted therefor the process of baking in a close chamber or oven. The latter no doubt is the more convenient and economical method, but it may be questioned whether it is as wholesome. In baking the meat is, as it were, cooked in its own juices; the vapors exhaled from the warm meat are confined in the close oven and do not escape into the atmosphere, adding no doubt to both the flavor and richness of the food. At the same time the joint surrounded by this dense vapor does not yield its juices so freely as when roasted. Moreover the gravy from baked meat when cut, always yields more grease than does that from roast meat.

It is this retention of the volatile aroma and unctuous juices that render baked meat so popular, and no doubt with persons of strong stomachs it is not harmful;

but when digestion is weak it is undoubtedly injurious, and, when continued, its use aggravates or causes indigestion, and in many instances very considerable benefit has resulted from the physician's advice to the patient to have his meat roasted instead of baked.

Our knowledge at present regarding the respective digestibility of different fats is very imperfect; still the general and popular opinion is that the more oily fats are less digestible and more "bilious" than the solid, and it is these fluid fats which form the grease of cooked meats.

The author states that he does not wish to raise a panic with regard to the useful oven, but merely suggests that baking may in some instances be the unsuspected cause of indigestion, in which case a return to the roasting jack and the open fire would prove to be a step in the direction of a rightful cure.

MEDICAL CHEMISTRY.

BENZOATE OF BISMUTH.

Bismuth benzoate is claimed by Vibart (*Sem. Med.*) to be preferable for various reasons to the salicylate, the main objection to the latter being its uncertain composition and frequent contamination with free salicycle acid, whereby it becomes caustic in contact with the lining of the stomach. Bismuth benzoate may be prepared in the following manner: Mix together 100 grams of bismuth nitrate, 20 grams of glycerin and 60 grams of distilled water. To this add a hot solution consisting of 76 grams of sodium benzoate and 200 grams of water. The bismuth benzoate is precipitated as a white, insoluble powder of slightly metallic taste. It is decomposed in the organism, benzoic acid being found in the urine.

A SUBSTITUTE FOR GOULARD'S EXTRACT.

The action of magnesium acetate solution upon magnesium oxide in hydrating the latter and causing a considerable portion to dissolve, has been made use of in the manufacture of "*sinodor*" preparations as deodorizing agents. Magnesium acetate solutions also have the power of dissolving lead oxide, and this is the basis of a patent for the manufacture of "white lead." A solution containing 4 per cent. lead oxide is especially desired. It is made as follows: 187 gm. dilute acetic acid are diluted with water and saturated with magnesium carbonate free from chloride, and water added to make one kilo. After filtering this, the specific gravity should be about 1.0377, the solution containing 10 per cent. magnesium acetate; it is then heated in a water bath for one hour with 7 per cent. lead oxide, and by the addition of water the original weight (one kilo) restored; after standing 24 hours the specific gravity is again determined, a difference of 0.001 indicating 1 per cent. lead oxide; if the difference is greater than 0.004 the solution must be correspondingly diluted. From the finished preparation an efficient *lead water* can be made by the addition of 4 parts to 96 parts water.—Dr. Kubel, *Archiv. dér Pharm.*, 1892, 173,

NEWS AND MISCELLANY.

ADULTERATED IODOFORM GAUZE.

Surgeons who use this dressing will do well to have its efficacy tested. The "Pharmacie Centrale" of Paris, warns the profession against the use of a gauze which professes to contain 30 per cent. of iodoform, but really contains only 8 per cent., the difference in color being made up by a preparation of phenol.

THE AMERICAN ELECTRO THERAPEUTIC ASSOCIATION.

A very full program is announced for the coming meeting of the American Electro-Therapeutic Association which is to be held in New York, at the Academy of Medicine, 17 West 43d Street, October 4th, 5th and 6th.

There will be two interesting discussions one upon "The Relative Fœticidal Value of the Different Currents and their Application to Ectopic Gestation," to be discussed by many prominent gynecologists and electricians, and another upon "Cataphoresis and its Practical Application as a Therapeutic Measure."

Papers are announced by Drs. Geo. J. Engleman, Wellington Adams, and Geo. F. Hulbert, of St. Louis; Wm. F. Hutchinson, of Providence, R. I., Franklin H. Martin, of Chicago, Ill., A. Lapthorn Smith, of Montreal, Canada, R. J. Nunn, of Savannah Ga., Thomas W. Poole, of

Lindsay, Ontario, C. Eugene Riggs, of St. Paul, W. J. Herdman, of Ann Arbor, Mich., D. S. Campbell, of Detroit, Mich., G. Betton Massey, of Philadelphia, Henry D. Fry, of Washington, D. C., H. E. Hayd, of Buffalo, N. Y., J. H. Kellog, of Battle Creek, Mich., C. G. Cannaday, of Roanoke, Va., Ernest Wende, of Buffalo, N. Y., and Wm. J. Morton, Augustin H. Goelet, A. D. Rockwell, Landon Carter Gray, Robert Newman, Ephraim Cutter, Frederick Peterson, G. M. Hammond, F. Van Raitz, of N. Y., and many others. Dr. J. Mount Bleyer, will give an instructive lecture with demonstrations entitled, "The Phonograph and Microphonograph, the Principles Underlying them and their Uses in the Sciences."

In connection with the meeting, there will be an exhibition of modern medical electrical apparatus, all the prominent manufacturers being represented.

The social part of the program includes many pleasant surprises.

SLEEPLESSNESS.

Whether, as appears likely, sleeplessness is more characteristic of our own days than those of our predecessors, or that, in accordance with a scientific fashion, it is now more noticed, we certainly hear of its prevalence with somewhat startling frequency. The nostrums proposed for the cure of this disorder are numerous. Many, if not most of them—we do not for the moment speak of narcotic drugs—are empirical, and are cast upon the public intelligence without any conscious reference to causes actually at work upon the brain and other nervous tissues. It does not necessarily follow that they are valueless, and we should no more think of repudiating their ordinarily legitimate exercise than of refusing the occasional aid of such medicinal agents as may be safely trusted to discharge the same needful function. It is to be understood, however, that we would, wherever possible, avoid, and replace by simpler non-medicinal methods, even such occasional useful aid. This attitude is but rational, if we consider that the true object of treatment is never by choice merely palliative, but curative, and for cure there is needed the detection and removal of an active cause. The revelation of the causes of insomnia is, indeed, no simple matter. Thus much, however, we may say—namely, that just as the state of the brain in normal sleep implies a quiescent cerebral circulation somewhat reduced in volume, so in those whose nights are habitually restless we shall commonly find a condition of cerebral vascular tension. This, let it be noted, is not incompatible with general anæmia or with defective brain nutrition. There is, indeed, nothing so conducive to local vascular congestion as the constant exercise of a weakened organ. Mental worry thus acts upon the jaded brain, and we need not wonder, therefore, that it "murders" sleep. The true means of relief is as clear as it is often impossible. In such cases, however, and still more in others where adequate, or even more than adequate, nutrition is maintained, we find a simple and ready antidote in physical exercise. Muscular activity, in fact may be employed to balance nervous irritation. In it we provide a means of counter exhaustion. There is a transference of vascular excitement, and of tension, with corresponding relief at the site first affected. Further, the same process implies a stimulation of the general metamorphic energy and the removal from the tissues of irritant excretable products. This brings us to another cause of insomnia, particularly of that which we sometimes observe in the gouty and rheumatic. It is probably on the ground of removal of such superfluous substances that we must explain the salutary action of the traditional "night cap" of hot water, or the boiled onion, a stimulant of the kidney, at supper. Where mental over-activity or irritation has to do with insomnia, the influence of change—that is, of a change in thought—should have a trial. It is no doubt a blind groping after this remedy that induces some to read themselves asleep. Better in several ways is the practice introdnced by the German Kant, who spent some time before he retired for the night in cutting off by an effort of thought each mental occupation of the previous working hours. We might, however, multiply the stock of remedies without meeting all possible needs. The desirable course for any sleepless unfortunate to adopt is obviously not to resort to sedative drugs to allay his distress, but to seek the advice of his trusted medical attendant and its remedy in the discovery and the removal of its cause.—*Lancet.*

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Clinical Lectures.

THE DIFFICULTIES AND DANGERS WHICH MAY ARISE FROM INDISCRIMINATE ATTEMPTS AT THE REDUCTION OF STRANGULATED HERNIÆ BY MANIPULATION.

By WILLIAM H. BENNETT, F. R. C. S. Eng.,

SURGEON TO ST. GEORGE'S HOSPITAL, LONDON.

Gentlemen:—It is, I assume, a matter of common knowledge that many methods of treatment in themselves excellent, and when properly used of much practical utility, may under certain conditions be not only harmful but perhaps disastrous, especially if applied without discretion by any person who does not possess the knowledge or skill requisite for their safe employment. The means available for the reduction of a strangulated hernia without operation form no exception to this rule, and by an unusual chance there are now under my care two patients lying in the Harris ward, separated from each other by a single bed only, whose cases illustrate this fact in a remarkable way.

Case 1. *Strangulated inguinal hernia*; *prolonged unsuccessful taxis*; *herniotomy*; *gut found partially lacerated*; *suture of bowel; radical cure; recovery*.—W. F——, a man aged twenty-seven, was admitted on Nov. 18th, 1891. In the previous April he found for the first time that he was ruptured on the right side. The hernia was always reducible, and a truss was continually worn. On the morning of the day before the patient came into the hospital the spring of the truss broke and he was therefore obliged to work without it. The hernia soon came down, and he was unable to reduce it. Vomiting thereupon set in, and during the night occurred many times. A few hours before his admission an attempt, lasting about a quarter of an hour, was made to reduce the hernia by manipulation, but without success, the the patient suffering great pain, especially during the latter part of the attempt. The bowels acted regularly up to the morning of the 16th. On admission the man had an anxious look and was evidently in very acute pain. There was occasional retching, by which a small quantity of sour-smelling gastric contents was brought up. The tongue was white, but moist; the pulse 100 and fairly full. In the right side of scrotum and running up to the groin was a large, acutely painful and tender swelling, very tense resonant and entirely without impulse. There was much pain about the umbilical region and also some tenderness over the hypogastrium, but no distention. Having regard to the prolonged taxis to which the hernia had already been subjected, no further attempt at reduction by manipulation was made, herniotomy being at once performed. Upon opening the sac several ounces of reddish fluid, containing air, escaped. A large knuckle of greatly distended gut then came into view, deeply congested and greatly glued to the lower part of the sac by very recent peritonitis. On freely exposing this gut, by laying open the sac from end to end, there was found over its most prominent part (i. e., at the anterior aspect of its lower end) a longitudinal laceration involving the peritoneum for about an inch; over half its length this rent passed through the subjacent muscular coat, from the opening in which the mucous membrane protruded, and seemed on the point of bursting. The stricture, which was at

*Delivered in St. George's Hospital Medical School, and published in the *Lancet*.

the inner ring and extremely tight, was then very freely divided with the hope that the tension in the gut would be thus sufficiently modified to allow of the wound in the bowel walls being sutured. This, however. was found to be impracticable, as the stitches immediately cut their way out, the tension not being sufficiently relieved spontaneously. It was at the same time clear that any attempt to reduce the tension by pressing the air contained in the bowel back into the abdomen would result in the rupture of the protuding mucous membrane, which I was particularly anxious to avoid for reasons to be presently discussed. I therefore selected the healthiest available spot on the bowel, and there punctured it with an exploring trocar, afterwards emptying the knuckle of gut of the contents, which consisted principally of altered blood, through the cannula. This having been done the gut naturally collapsed. The wound in its walls was then brought together with perfect ease and safety by means of five Lembert sutures of silk. A single suture of the same kind having been passed across the small peritoneal wound made by the trocar, the bowel was finally thoroughly cleansed and returned into the abdomen. The neck of the sac was then isolated, ligatured, and severed from the scrotal portion; the pillars of the ring were closed by kangaroo tendon sutures, a drainage-tube inserted, and the superficial wound united with silkworm gut. On the 20th four loose motions containing altered blood were passed. The bowels acted daily after this, and by Dec. 18th the patient was walking about the ward apparently in perfect health. In fact, he was practically well by Dec. 4th, but being very apprehensive about himself he was allowed to remain in bed longer than was really necessary. In addition to the points specially relating to the main subject of the present lecture, this case affords a good illustration of the successful treatment of cases of the kind by a method to which I wish to call particular attention. In all instances of strangulated hernia in which the laceration of the bowel does not involve the whole thickness of its walls, so that the intestinal canal is not opened up, the gut as the result of the strangulation is of course generally distended. In attempting to bring together the edges of the wound under these circumstances difficulty generally arises in consequence of the sutures cutting their way so readily through the peritoneum, that sufficient traction cannot be made upon them to effect the closure of the laceration with any safety. This tendency on the part of the stitches to cut their way out is due partly to the unyielding tension of the bowel and partly to the softening of its coats from pathological changes. Not only therefore is very little pressure required under such circumstances to increase the rent in the peritoneum, but when the tear involves the whole thickness of the muscular coat the mucous membrane bulges through the wound, and extremely slight force only is necessary to cause the protuding portion to give way, thus converting an incomplete laceration into a wound opening up the intestinal canal.

In cases of this sort it is sometimes also found that even after free division of the stricture no sufficient alteration in the tension occurs until digital pressure is used, which may be quite sufficient to burst the stretched and protruding mucous membrane—an accident which it is most important to avoid if possible, not only because it must of necessity allow the bowel contents to escape over the wound, but also because the protruding membrane is usually so thin and injured that if it is damaged further by laceration, incision or puncture, ulceration, and perhaps sloughing, is prone to occur later on, and give rise to trouble which may possibly be serious. In order to diminish the tension of the bowel and to allow of its shrinking of its own accord and without any necessity for inflicting further injury upon the protruding mucous membrane, I adopt and confidently recommend the following plan, which, it will be noticed, was used in this case.

The stricture having been freely divided, and the distended knuckle of gut carefully cleansed, an exploring trocar is passed into the bowel through the portion of its walls which appears most healthy (i. e., at a point which is certain to be somewhat remote from the laceration). The contents of the gut, consisting generally for the most part of altered blood, pass out easily through the cannula into a suitable receptacle, and are thus conducted quite away from the peritoneum, which therefore remains entirely unsoiled, as the muscular coat at the point of puncture clings so closely to the cannula that no leak takes

place. On the other hand, if the puncture be made in the protruding mucous membrane, leakage is certain, and soiling of the whole rent occurs, in addition to the injury inflicted by the puncture on the damaged structures. The collapse of the gut which follows spontaneously makes the approximation of the peritoneal surface over the laceration perfectly easy and safe, no matter how softened the intestinal walls may be. The gut may then be returned without hesitation, after it has been finally cleansed and a peritoneum at the seat of the puncture. This last detail is perhaps hardly necessary, but it is a source of additional safety during the return of the bowel, and adds nothing material to the length of the operation. The method here described of relieving tension in damaged or partially lacerated bowel by puncture through the healthier parts rather than through those which are most injured has, so far as I know, not been previously insisted upon but I am sure it is worthy of adoption.

Case 2. *Inguinal hernia with large hydrocele; attemped reduction by patient; rupture of wall of hydrocele, which was thus converted into a hæmatocele.*—W. B ——, a laborer aged fifty-three, was admitted into Harris ward on Nov. 21st, 1891, with the following history. Three years previously he commenced wearing a truss, as he was told he had a rupture; and about eighteen months later he noticed some swelling of the scrotum which, upon applying to the Truss Society, he was told was not a hernia. On the day before he came to the hospital he felt some pain about the groin and noticed more swelling there than he had previously seen. Thereupon, thinking it was the hernia which had come down, he attemped to put it back by seizing the whole scrotal tumor in his hands and using considerable force. No immediate alteration was produced in the swelling, but acute pain followed directly, and in a few hours the whole scrotum became almost black. The pain gradually decreased, but much tenderness followed, on account of which he applied for treatment. On admission the patient was a big, strong-looking man. The left side of the scrotum was much discolored and distended by an oval swelling, very tense, tender, and non-translucent. Its upper end was quite free from the abdominal ring, which was large, and through it a hernia came down when the patient coughed. The bruising slowly disappeared, and the swelling decreased a little in size after rest in bed. On Dec. 17th, I laid open the scrotal tumor, letting out a quantity of hydrocele fluid and altered blood. On examining the walls of the cyst there was found at the upper and inner part a large rent, admitting the ends of three fingers, which passed into a considerable space beneath the scrotal integuments. The parts about this were matted together with recent inflammatory material and the walls of the hæmatocele were covered with new lymph. The hernia was not exposed in the operation, as it was thought wiser, considering the inflamed condition of the tissues, to postpone its radical cure, which the patient was anxious to have performed, until a subsequent date. The patient naturally made an uninterrupted recovery.

The main point of individual interest in this case is the fact that the injury was self-inflicted. Although the lesion produced here by the patient's manipulation was not a serious one it may sometimes be so. I have myself had an opportunity of seeing an instance in which taxis applied by the patient resulted in a small rent in the gut through which some fœcal material had escaped into the sac. It is true that the gut at the seat of injury had obviously been adherent and the laceration had resulted from the tearing away of the adhesion by the force applied; the fact, however, is significant that laceration of the bowel itself was produced by no more violent manipulation than that applied by the patient himself, who was perfectly accustomed to reduce his rupture.

The main possible disasters which may immediately follow upon attempts at the reduction of herniæ by taxis may be summarised as follows:—(1) Bruising the bowel; (2) rupture of the bowel wall; complete and incomplete: (3) laceration of adhesions; (4) rupture of the sac; (5) hæmatocele (in cases complicated with hydrocele); (6) hæmatoma of scrotum and surrounding parts; (7) reduction of the whole hernia with the sac (reduction *en bloc*).

1. *Bruising of the bowel.*—Some bruising, as shown by subperitoneal extravasation, of large or small extent, about the herniated bowel will be found in the majority of cases which have been submitted

to taxis unless extreme gentleness only has been used. The extent and severity will naturally depend, for the most part upon the amount and direction of the force applied and to a considerable degree upon the condition of the gut, which bruises more readily when greatly distended, especially in neglected cases which have been allowed to continue for a long period without treatment. It is interesting to note that bruising of the bowel, if in any way extensive, although without any apparent breach of surface on the peritoneal aspect, is almost invariably associated with bleeding into the intestinal canal, a fact conclusively demonstrated in many cases by the characteristic appearances of the first motion passed after the relief of the stricture, which nearly always contains altered blood. It may, in fact, be accepted without reserve that attempts at reduction by manipulation produce some bruising of the bowel in the great majority of cases of strangulated hernia. At the same time it may be fairly admitted that as a rule, unless great carelessness has been used, no permanent harm results. It is nevertheless necessary to insist on the occurrence of injury of the kind in order to give weight to the fact that attempts at reduction by manipulation are liable at times to cause injury. Taxis therefore should not be regarded, as it seems to be by some people, as a plan of treatment which if it fails to reduce the rupture, at least can do no harm. This last remark must not be taken to imply any objection to the proper practice of this method, but merely as a warning against its use carelessly and without due regard to possible evils which may under certain conditions result.

2. *Laceration of the bowel.*—This may of course involve the whole thickness of the intestinal wall or only one or more of its coats; the former is naturally the most serious since it allows of the escape of fæces into the sac. The latter condition may vary in degree from an almost imperceptible crack in the peritoneum to a laceration in the peritoneal and muscular coats inches in length, in which case the mucous coat protrudes, hernia-like, through the opening in the muscular wall. Whether the laceration is partial or complete the treatment is identical. The edges of the wound must be brought together with Lembert sutures, care being taken that the end stitches—if the lesion is of any extent—are placed a short distance beyond the extremities of the rent. When the gut is too tense to allow of approximation of the peritoneal surfaces it should, if necessary, be emptied in the way I have described in the first of the cases which form the text of this lecture. However small the crack in the peritoneum is, even if it be hardly perceptible to the eye, a single suture should be passed across it. If the condition of the patient in case of partial laceration is so desperate that the delay entailed by the suturing process is not justifiable the gut should be cleansed and returned into the abdomen, an unperforated drainage tube of large calibre being left lying in the canal in the way I have recommended in a lecture published in *The Lancet* in 1890.

A point of great interest to which sufficient attention has not, I think, of late been paid arises here with reference to the situation at which laceration from injury occurs in these cases. There appears to be an idea, which is traditional and supported by the teaching of the schools now that the tear produced by injury in the gut of a strangulated hernia takes place *at the seat of stricture* in consequence of the way in which the sharp edges of the constricting tissues as it were, cut into the distended bowel when pressure is exerted upon it.

Now I have seen several cases myself in which a rent in the gut was undoubtedly produced by taxis, and in two of these the lesion *was not at the point of constriction but on the prominent bulging and most distended portion of the bowel.* Both of these cases were recent, and in each the rent was in the long axis of the gut. The same result followed in some experiments made by me on the cadaver, artificial strangulation in two cases of old herniæ having been produced by inflating the bowel from the abdomen and forming a stricture by ligaturing the neck of the sac together with its contents. The hernia was in one instance then violently crushed and in the other struck with a stick; in both the laceration occurred on the prominent part of the strangulated knuckle and in the long axis of the gut. On consideration, this result, so far as the situation of the injury is concerned, is I think precisely what should be expected in recent cases, for in such the rent begins in the peritoneum, which under pressure

naturally gives way at the weakest point (that is to say, where it is most thinned and stretched by distension). A sudden blow, therefore, or prolonged hard pressure would as a matter of course lacerate the peritoneum in the part most stretched and thin— i. e., over the end of the distended knuckle rather than at the seat of constriction, where not only is it unstretched, but where it is actually supported by the surrounding parts.

In cases far advanced and neglected the state of affairs is altogether different, because in them the gut at the seat of stricture is indented by the edge of the constricting tissues, partially eaten through by ulceration from within, or perhaps grangrenous and on the point of giving way. Then the weakest point is at the strictured part, and very little force may be necessary to complete the perforation which has already commenced. It is, I presume, in connection with cases of this latter kind that the traditional teaching has fostered, for in recent cases of strangulation it certainly does not apply.

3. *Ruptures of adhesions in the sac.*— The tearing of recent adhesions during attempts at reduction by manipulation need not have any serious result, but free hæmorrhage into the sac may thus be produced so as to fill it completely with blood, although no serious lesion may be apparent. In old irreducible herniæ, in which band-like adhesions sometimes exist between the bowel and the sac wall or between different parts of the bowel itself, no harmful results need follow if the adhesions themselves give way, but if, as may happen, an adhesion brings away some of the intestinal peritoneum with it, a partial laceration of the gut results, which is, if at all extensive, a serious condition, especially if the case has been neglected and operation long deferred.

4. *Rupture of the sac.*—This, although a recognized injury and classed as one of the modifications of the reduction *en masse*, must be a very rare sequence of taxis, as the amount of force required to tear the sac is very great and would hardly be intentionally applied. Bruising of the sac is, however, common and I have seen a portion of its wall torn away with an omental adhesion; this, however, is not a rupture in the sense under discussion— i. e., a splitting of the sac wall from sudden or gradual pressure. In the post-mortem room I have not been able in artifically strangulated herniæ to rupture the sac without also bursting the gut. Rupture of the sac is therefore probably too rare to be other than a curiosity; indeed Sir Astley Cooper, after his large experience, says that it "scarcely ever" occurs from any cause. Formerly spontaneous rupture of the sac was also a recognized condition, but actual evidence of its existence seems wanting, or at all events is not convincing.

5. *Hæmatocele.*—A good example of this accident is afforded by Case 2, described in this lecture. After what I have said concerning the difficulty in causing rupture of a hernial sac it may at first sight seem strange that the sac of a hydrocele should give way so easily. There is nothing inconsistent, however, in this, for it must be borne in mind that the sacs of hydrocele sometimes undergo pathological changes which result in softening and thinning, so that they become weak in parts.

6. *Hæmatoma from rupture of a large vein or veins outside the sac.*—Enormous blood extravasation may be thus produced and occasionally upon the application of comparatively slight force, especially in elderly people. I once had an opportunity of seeing a large blood swelling involving the scrotum and groin, which were nearly black from discoloration, said to have followed upon nothing more violent than manipulation necessary for the adjustment of a truss to an easy reducible hernia in a subject nearly eighty years old.

7. *Reduction "en bloc"—i. e., the reduction of the sac, together with its contents, the strangulation being therefore unrelieved.*—The only point to which I need here call attention in this respect is the singularly small amount of force which sometimes seems necessary to produce this accident. I have personally seen only one case, and that was not in my own practice. The hernial tumor seemed to disappear almost the moment the hand was laid upon it and certainly before there was time for the application of any methodical violence. So much was this the fact that I cannot help feeling that there must be in such a case some kind of spontaneous action from above which contributes to the reduction. Is it possible that extreme irregular spasmodic attempts at peristalsis may act in this way?

It is only fitting that such an ominous list of casualties, which are not only possible, but actually occur in practice as the result of the use of taxis, should be followed by some indication as to when and how the reduction of an irreducible hernia by manipulation may be attempted without risk. The relative safety of this plan of treatment is dependent on three conditions: (1) The manner in which the taxis is applied; (2) the period during which the manipulation is persisted in; and (3) the state of the hernia.

1. *The mode of applying taxis.*—This may apper such a purely elementary point as to render its consideration hardly justifiable outside the pages of a student's text book. It is nevertheless true that practitioners, otherwise intelligent and trustworthy, do at times manipulate a hernia in the manner best calculated to cause injury to the contents of the sac, whilst it affords the least possible chance of effecting reduction. I do not propose to occupy time now with a description of the method by which the taxis may be applied safely and with a fair prospect of success, as it can be more usefully learnt from practical demonstration at the bedside, but some of the details of the process are so important and essential that they require a passing notice. The details referred to are as follows: (*a*) All manipulations should be conducted only with thoroughly warm hands; (*b*) the neck of the hernia should be firmly supported by one hand whilst the other manipulates the body of the tumor. (*c*) In using the fingers all pressure from the finger-ends should be made by *the front of the digital pad and never by the actual tips.* (*d*) The pressure necessary in the manipulations should be gentle, firm and regular, not forcible, unsteady and spasmodic. The necessity for warm hands, for the support afforded to the neck of the hernia, and for the avoidance of the use of the actual finger tips, is, I cannot help feeling, not so universally acknowledged as it certainly should be, for I have more than once seen attempts made at the reduction of a rupture by grasping the body of the tumor with hands almost blue with cold, the neck of the hernia being left entirely unsupported, and then with a punching and rolling movement, during which the finger tips have been deeply pressed into the parts, the force has been gradually increased until further persistence in the attempt has been rendered impracticable by the protests of the patient. Where injury is possible it is from some faulty plan as this that it is most likely to result. The cold hands excite every resistance in the way of muscular action; the want of support to the neck of the hernia makes its reduction very unlikely by allowing the gut to bulge over the margins of the constricting ring, and, beyond this, in neglected or longstanding cases when the bowel has commenced to ulcerate from within, the pressure of the sharp edges of the stricture acts at a great advantage in further injuring and perhaps bursting the thinned and weakened intestinal walls. Finally the sharply indenting finger tips are admirably adapted for causing an unnecessary amount of bruising and possibly laceration of the gut.

2. *The time which should be occupied in taxis.*—Judging from my own experience, and from what I have seen in the practice of others, five minutes should be taken as the outside limit during which manipulation of a hernia in cases of apparent strangulation or when impulse on coughing is absent may be with safety persisted in, no matter how gently it is applied. In unstrangulated cases the same time should always be considered as sufficient, for, although no actual harm need result, if the time be extended it may very easily produce it; moreover, if success is not attained by the end of five minutes it is very unlikely to result at all, and further attemps are practically useless.

3. *The condition of the hernia.*—When properly applied and with the precautions just mentioned taxis may be used with safety—(*a*) in all cases in which the true hernia impulse is present, provided always that there is neither any marked tenderness nor inflammation in the sac or its contents, when its employment would of course be entirely negatived; (*b*) in very recent cases of strangulation where the tension is not extreme. This latter is a recognized principle and is therefore worthy of respect, but I very much doubt whether it is possible, excepting perhaps in infants, to reduce by manipulation any rupture in which the hernia impulse is not present. For myself at least I must admit that I have never been able to return with any resonable application of force a hernia in which I could detect no impulse. This impulse, it is true may have some-

times been slight, but it was present all the same in the cases where reduction was possible, although it must be admitted that I could not always demonstrate it to my house surgeons, in the hospital patients. A large distended hernia universally resonant should be treated with more than usual gentleness, for in such cases the bowel is far more liable to injury than in any other kind, especially if adhesions happen to exist in the sac. Hernial tumors dull on percussion, with omental or fluid contents, may be manipulated with greater freedom without risk of damage being done, but in these reductions is entirely out of the question in the absence of impulse, the utility therefore of persistence in the attempt at all under these circumstances is not plain. Every case of apparently strangulated hernia must necessarily be treated upon its individual merits, but, for my own part, I am sure that, as a general principle, it is better in herniæ which are obviously strangulated and entirely without impulse to perform herniotomy at once rather than make attempts at reduction by manipulation, because I have no doubt whatever that early herniotomy in fairly competent hands is infinitely less hazardous than an unwise persistence in fruitless attempts at reduction by taxis. If due regard be paid to the patient's welfare, one thing at least is certain—viz., that a strangulated hernia which has once been subjected to taxis should be operated upon at once, and no further manipulations used until after the tumor has been explored and the structure freely divided.

It must not be imagined that all risk of lacerating the bowel during attempts at its reduction necessarily ends after the sac has been laid open in herniotomy, or indeed in every case after the stricture has been divided, for, although to the best of my knowledge the accident has not occurred under these circumstances in my practice, I have been present at an operation in which a surgeon of experience certainly did produce a laceration of the peritoneal coat of the bowel, whilst attempting to reduce it after the division of the stricture which obviously gave rise to the strangulation. This difficulty sometimes experienced in reducing the hernia after the stricture has been cut is undoubtedly as often as not due to the division being not sufficiently free, the little nick so commonly recommended being too slight for securing the necessary relaxation of the constricting band. I am sure, from my own observation that harm is more often likely to arise from too slight a division of the stricture than from one which is too free. Free division of the parts about the neck of the hernia as a rule entirely obviates any chance of injury to the gut, whilst the possible anatomical dangers entailed in this free incision have been, I have no hesitation in saying, unduly exaggerated.

Although I make a practice of dividing the stricture freely, I have never had the slightest cause to regret it, and certainly have never seen any hæmorrhage which has given the least anxiety under the circumstances. The only case in which I had any trouble whatever on account of bleeding after herniotomy was a strangulated umbilical hernia, in which alarming hæmorrhage took place into the abdominal cavity from a torn omental vein. This vessel was almost certainly burst by the force which was necessary for the return of the hernia through a ring which had been only slightly divided; had the division been altogether more free the hernia could have been reduced without any force and the vessel would, I believe, have undoubtedly have remained intact.

I now come to a point which is especially interesting in connection with a further difficulty which occasionally arises in the reduction of a hernia, even after the stricture has been freely divided. At first sight it is a singular fact that any difficulty should occur at all under these conditions, still it is quite certain that it is sometimes met with. For instance, in a case of inguinal-hernia, under my own care I was unable, after repeated division of the stricture, to reduce the intestine, although on passing the finger, as is my habit, through the canal into the abdominal cavity, I could feel nothing in any way constricting the bowel, The only noticeable thing to be felt was a loose membranous fold which, springing from the outer wall of the canal, lay quite flaccid upon the gut, and alllowed my finger to pass by it with perfect ease. Whilst I was attempting to return the bowel, the end of one finger being placed on it just below this fold, I noticed that as the gut was pushed against the flaccid flap the latter seemed to grip the bowel after the manner of a sling. I therefore divided

the fold, and then returned the hernia without the least trouble. Here, then, the obstacle to reduction was clearly this loose sling-like fold. The existence of membranous flaps like this and the manner in which they sometimes resist the return of the gut in operation for strangulated-hernia have not of late received the attention they merit. Bands and flaps of this kind, which are not very rare, should invariably be divided whether they seem to compress the bowel or not, for if they do not actually prevent reduction it will be much more easily effected after their division. The history and mode of formation of these interesting folds may be conveniently reserved for consideration in another lecture.

CHOLEDOCHOTOMY.

Prof. Küster reports the case of a woman aged 49, who had suffered for two years from attacks of violent colicky pains in the abdomen, recurring at intervals of four to six weeks and followed by jaundice. Gall-stones had been frequently found in the fæces. The patient was much exhausted and emaciated. Laparotomy was performed, an incision, ten cm. in length being made parallel with and below the border of the ribs. The large intestine was connected with the lower border of the liver and the gall-bladder by firm adhesions which were slowly separated. The gall-bladder was empty, but the common bile-duct contained two calculi, which were extracted through an incision two cm. long. The wound in the duct was closed by catgut sutures snd a continuous silk suture. A tampon of iodoform-gauze was inserted and the greater part of the abdominal wound sutured. Five days after operation the tampon was removed, a fistula being left, which later gave rise to a severe hæmorrhage, necessitating the reopening of the entire abdominal wound. The fistulous track was curetted, cauterized and tamponed, and the patient now made a rapid recovery, the jaundice disappearing completely. The author recommends choledochotomy in all cases of calculi in the common duct, where the latter is accessible and the stone can be felt. The operation has been performed seven times (inclusive of the author's cases) with only one death.—*Archiv. f. Klin. Chirurg.*, *Bd.* 43, *Hft.* 1, 1892.

Communications.

DISEASE OF THE KNEE-JOINT IN ITS CONVALESCENCE.

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For pathological reasons disease of the knee-joint has been divided into stages, generally three, in order to indicate its progress from the invasion to the destruction of the articular structure. But after appropriate treatment there is a regressive stage, and, finally, a convalescent stage. Failure to pass a patient through this latter condition properly is the cause of frequent recurrence of the inflammation and may on this account be mistaken for a tuberculous or fungoid affection, or due to a loose, floating cartilage; it is then condemned as a hopeless case offering excision or amputation as the only remedy. Bony ankylosis of the knee-joint from disease, treatment, or excision, is rare, difficult to obtain, unnecessary and undesirable. Fibrous ankylosis—whatever that condition may be—leaves the joint stiff but too unsteady for utility; at the same time it can be taken advantage of in restoring to the joint its function, that is, the mobility of a ginglymoid articulation, by encouraging voluntary muscular action while protection from undue force or use is provided.

Let the healthy lower extremity be supported by the surgeon placing one hand under the lower third of the thigh, and the other hand under the lower third of the leg. The patient is then asked to rest the weight of the limb in the doctor's hands—the muscles to be thus relaxed or devitalized—to use a term of Delsarte. Let there then be made a very slight, quick, lateral movement of the lower third of the leg. There will be felt or heard a click or bump at the knee-joint. Now, after a period of rest from use, enforced by the treatment or in the course of the disease, the muscles of the knee-joint are in this devitalized condition, and any attempt to use the knee-joint in walking or standing exposes it to a succession of injuries of this character. These either sooner or later of themselves produce a phlegmasia of the knee-joint, or maintain a condition which needs only

a slight fall or twist to accomplish it. If a so-treated patient can walk at all, and he does so with the knees exposed to view, the lateral jerk of the knee can be detected by comparing the action of the sound limb with its affected mate tho' the patient may be entirely ignorant of such effect.

The following case serves to illustrate the effect of this lateral inward movement: Patrick O'Connell, æt. 19, employed as orderly at the Ninety-ninth Street Reception Hospital (Department of Charities and Correction, New York City) was disabled every few months by synovitis of the left knee and was on that account brought to me in August, 1881, by one of the surgical staff. His duties required him to be active upon his feet. He had not received any injury, and there was no assignable cause for the recurrence of these attacks of synovitis. They yielded to treatment, and on recovery he could go about as usual. His health was good. He had a tall, spare, muscular, well-made form and a symmetrical gait stepping firmly on both feet. The appearance and function of the knee-joint were good in sitting and standing postures; but in searching further I had him strip, and, placing my hands on the crest of either ilium, discovered a want of symmetry in the length of the lower extremities, the left being 1⅞″ shorter than the right, unsuspected by the patient or those seeing him. When attending school some years previous however, he remembers being chided by the master, because, when sitting in class with other boys he did not place his knees on line. He never knew it was because there was a difference in the length of his legs. On having him walk across the room several times, a quick, lateral inward movement of the left knee at each step could be detected. The force or impact from bringing the foot 1⅞″ to reach the ground was received on the knee in a lateral direction and was an ever-present source of traumatism, particularly when his duties as hospital orderly required him to move about quickly in many directions. As the non-symmetry of limbs was a product of a too slow growth of the left extremity or a too rapid growth of the right (neither from any morbid process), the change from equal to unequal lengths of lower extremities was so gradual that the patient accommodated his body to a symmetrical gait without noticing the lateral jerk at the knee. This disappeared on the addition of a high cork shoe, and at the last report three years afterwards, there had been no further trouble.

The anatomical structure of the lower extremities can here be used in explanation of this behavior of the knee. The heads of the two femora are separated by the width of the pelvis, and the top of their shafts are placed still further apart by their necks. If the bones of the lower extremity were parallel to the median line of the body from the hip-bone to the feet, the knees and feet would be too far apart for comfort and appearance; our locomotion would resemble the waddle of a duck, though in an architectural point of view the construction would be good for the purpose of bearing superincumbent weight. The oblique direction of the femora gives the desired closeness and parallelism of the legs at and below the knees, and to make up for the want of steadiness from change of direction, large, strong muscles are provided to maintain the hinge-like function—diarthrosis-ginglymus—of the knee-joints. The thigh is consequently the most muscular part of the body, and women have larger thighs than men because of their wider pelvis. Now, in this oblique direction of the femora we have a predisposing cause for traumatism in a previously damaged knee, when its muscles and ligaments—which form the bolt for its hinge-like function—are devitalized and only loosely hold their joint, tho' the extent of motion may be limited to a very small arc.

There is another muscular condition to be considered in knee-joint convalescence, the inability of one set of muscles to let go in response to the active contraction of their antagonistic set. In whatever position, or degree of flexion or extension, the knee-joint is left after the disease, there is an arc of motion beyond which the joint cannot move. It may be a fraction of a degree or 20 or 30 degrees in extent. The muscles will not "let go" beyond this limit. Eventually they become in a state of contracture adapted to this arc, which acts adversely upon the articular cavity. The non-use of the joint has prevented the necessary extent of synovial secretion and parts of the articular surfaces are brought in contact when not in a proper condition. The patient does not complain of pain, but dreads to have the knee

reach that limit of motion, and may not allow any motion for fear that limit may be reached.

The synovial membrane is here the largest and most extensive in the body. In the interior of the joint are the posterior crucial ligaments, which are blended with or inserted into the inter-articular cartilages, and are surrounded by the synovial sac. When the movement of extension is performed beyond or up to the normal or the acquired limit, there is a strain upon these ligaments and injury done the connecting synovial membrane. A synovial pouch of this membrane lies under the tendon of the quadriceps-extensor muscle, as it passes upwards from the patella, and is held in place by the subcruræus muscle. This pouch is unduly compressed on flexion of the knee-joint, if the extensor muscle does not relax in unison with that motion. The membrane extends laterally under the vasti muscles, and is secured to the inter-condyloid notch by a prolongation of itself, the ligamentum mucosum. It is so intimately blended with the tendons, ligaments, and cartilages of the knee-joint, that if not in a perfect condition to perform its functions, it cannot but be injuriously affected if an unevenly distributed pressure is placed upon any portion of it by mechanical unsteadiness of the joint in any direction or by unbalanced muscular action. And yet the function of this membrane, the secretion of synovial fluid, cannot be acquired, except as the result of some use and motion of the joint.

In applying therapeutic measures at the beginning of treatment, in all probability the first and principal one will be *rest from use*, enforced at once and complete. But on the arrest of inflammation, we desire to procure *rest from disuse*, and often erroneously apply that at once and complete too. To continue rest from use after the inflammatory condition has gone, keeps up an impairment of nutrition, which will as surely destroy the joint as does the disease; but to *at once* institute the use of the joint without giving some definite protection as to the extent of this use, while the nutrition of the joint gradually furnishes its structures with vitality to resume their functions, is equally pernicious.

A patient having the knee-joint presenting only symptoms of a sub-acute inflammation is placed on his feet with crutches arranged to receive the impact of the body, but not to take its entire weight from the limb; the foot is allowed to rest upon the floor with a sense of being protected from having too much weight thrown upon it, and though there may be added a height of not more than one inch to the shoe of the sound limb, it is done only to remove from the affected limb the feeling of a superincumbent weight beyond its capacity and to lessen the amount of muscular effort in lifting the limb; but in no sense to make it pendent as is so often and injuriously done. This height of sole should be gradually lessened, as the joint gains strength, and finally removed. But a more precise protection is often needed, and apparatus on the following plan should be provided: The weight of the body should come upon an ischiatic strap in the same manner as stated in reference to the crutches. It is part of the treatment that the joint is benefited by receiving a portion of its share of the superincumbent weight of the body. This is removed as the necessity for its use ceases, and the rest of the apparatus to which it is attached continued as will now be explained. There should be a joint at the knee which can be locked immovably at any desired angle, or to be free at the will of the patient. The construction of this joint should not permit lateral motion, and yet move easily and smoothly. The hinge-like surfaces are best made parallel and smooth by being cut from a solid bar of steel by the revolving cutter of a milling machine. Much of the lateral steadiness depends upon the bolt having a sufficiently large diameter, from ½ in. to ⅝ in. for an adult case. It takes the place of the "bolt" of the knee-joint which is composed of its muscles and ligaments. The bar to lock or to free the joint I had placed within reach of the hand without stooping and so it may be operated without disarranging the clothing and at the will of the patient. When the joint is free, it stops the limit of extension similar to the joint of a carpenter's rule and this limit should be fixed to prevent strain from the articular surfaces from contracture of the hamstring muscles. In a vertical position the weight of the body is thus received on the ischiatic strap at the top of the apparatus. A limit to the flexion of the knee is

also to be adjusted to prevent articular pressure from contracture of the quadriceps extensor acting through the patella. These limits may be increased by following the gain in extent of motion acquired by the knee, but not by the slightest degree *exceeding* it. From the bar on the outer side of the limb furnishing the above mentioned arrangements, are attached two firm bands, one above and one below the knee, which passing behind the limb, furnish attachment for plates giving lateral support above and below but not against the knee joint. The shoe bears a steel which receives the lower end of the outside bar by a slip-joint, and the apparatus is thus readily applied by the patient after the shoe is secured to the foot. It is important that the heel of the shoe extend underneath the steel forming this slip-joint upon which rests the lower end of the apparatus.

At night the knee must have local rest, so it may recuperate from a lateral as well as a posterior aspect; flexed to a degree at which the patient finds it is at rest. Either a gypsum shell may be used, or, better, a frame composed of two steel bars bent accurately to the contour of either side of the limb in its flexed position, the one on the outer side reaching from the trochanter to within an inch of the ankle. They are connected by three or four posterior steel bands sloped to fit the posterior contour of that part of the limb with which they come in contact. The inner bar bears an oval plate bent or pounded to receive the inner side of the knee-joint, against which the knee should find lateral rest. Leather, canvas or web straps should be secured to receive the posterior surface of the limb by adjustment to its shape at, above, and below the popliteal space. The frame is further steadied in position by adhesive straps or either side of the leg, received by buckles at the lower end of the frame. As there is not traction or counter-traction, they need be only a slip ¾ or ½ inch wide, and do not need any bandage, so that the action of the muscles is not interfered with. We now have a means of carrying out a definite plan for giving the knee protection from the traumatism arising from locomotion, while at the same time the joint and limb are acquiring restoration from the effects of its disuse. It is permitted to receive weight and concussion modified to suit its strength, but is protected from the traumatic lateral jerks spoken of; it has flexion and extension limited to an arc of motion suited to its capacity, and it is given local rest at night or at other times as may be needed. The use of the limb under these circumstances is followed by increase of mobility and return of strength. The atrophy above the knee, or the swelling and puffiness of the foot and leg disappear; and the backward displacement of the head of the tibia is gradually reduced by the action of the quadriceps extensor, which has been inert for want of some limit to its action upon the joint. Without this mechanical limit every attempt at muscular use of the limb would "jam together" its articular surfaces. The accomplishment of all this requires a combination of *professional* skill with mechanical precision, to be rendered at the con ception of the apparatus, during its construction and application and at the modifications required during the progress of the case. The patient should be considered under treatment while the apparatus is in use, and the *professional* responsibility continued throughout such use, should furnish the necessary skilled advice to guide the patient in the emergencies which arise from time to time in connection with the knee and the general health.

TREATMENT OF SYCOSIS.

Kromayer (*Therap. Monatsh.*, April 1892) says that sycosis is always due to micro-organisms, either the fungus of herpes tonsurans or the staphylococcus. The two points in the treatment consist in (1) preventing auto-infection, and (2) curing the affected places. The latter is effected by depilation and the use of Rosenthal's ointment (sulphur and zinc oxide), but if thick infiltrations exist scarification or scraping may be necessary. If many pustules are present incision and the application of solid nitrate of silver may be useful. Auto-infection is prevented by depilation of the sound hairs in the neighborhood and the vigorous application of a strong spirit solution of corrosive sublimate. Thus in the evening depilation is performed and the ointment applied, and on the following morning the parts are cleansed with paraffin from the remains of ointment, secretion, etc., then disinfected with the mercurial solution and covered with ointment.—*Brit. Med. Jour.*

THE MARRIAGE QUESTION FROM THE STANDPOINT OF GYNÆCOLOGY.*

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After thanking the Fellows for the honor they had bestowed upon him by electing him to the Presidential Chair, the orator briefly retraced the birth and development of gynæcology as a separate department from obstetrics, and to the *rôle* played by Scotchmen in its advancement. Pointing out that the term gynæcology comprised the study of all that concerned the well-being of the sex, as well as that of the morbid processes in individual women, he selected for the subject of his remarks the conjugal relations which must always be kept in view by the gynæcologist in treating the diseases of women, in order to render them capable of their highest function of motherhood.

It is, he said, the more necessary for gynæcologists to consider the subject that in recent times it has been fully treated of in all kinds of newspapers and magazines by writers of all varieties of mind. A year or two ago one of the daily papers intimated that it had received as many as 2,700 letters from various correspondents on the marriage question. When the laity are venting all sorts of ideas derived from sources that range from supernatural revelations to animal instincts, the trained physician will be expected to express the opinion that will correspond to the result of scientific observation, and philosophical reflection. This may especially be expected of the gynæcologist, for in the process of reproduction the *rôle* of the female is of higher import than the *rôle* of the male, and it belongs to him to consider under what conditions she may fulfil the functions with greatest safety to herself, and with best hope of producing numerous and healthy offspring.

"No excuse is needed," says Darwin, "in dealing with the effects of sexual selection, no excuse is needed for treating this subject in some detail," for as the German philosopher, Schopenhauer, remarks, "the final aim of all love intrigues, be they comic or tragic, is really of more importance than all other ends in human life, what it all turns upon is nothing less than the composition of the next generation. . . . . It is not the weal or woe of any one individual, but of the human race to come, that is at stake."

The union of the sexes that causes impregnation comes about under the impulse of a mutual attraction, so strong that the great naturalist whom I have first quoted in the application of the principle of sexual selection to evolution is led to "the remarkable conclusion that the nervous system (the medium of appreciation of sexual pleasure) not only regulates most of the existing functions of the body, but has indirectly influenced the progressive development of various bodily structures, and of certain mental qualities. Courage, he says, pugnacity, perseverance, strength, and size of body, weapons of all kinds, musical organs, both vocal and instrumental, bright colors and ornamental appendages have all been gained by one sex or the other through the exertion of choice, the influence of love and jealousy, and the appreciation of the beautiful in sounds color, and form; and these powers of the mind manifestly depend on the development of the brain."

Although the gratification of the sexual appetite is not a necessity for the individual, statistics show that the condition of celibacy is not favorable to health, a fact which is admirably shown in Bertillon's article on "Marriage" in the Dictionnaire Encyclopédique des Sciences Médicales." The table drawn up by this observer shows that the mortality is markedly higher among bachelors and widowers than among husbands, the same proportion holding good, though less strikingly, among the female portion of the population.

1. Mortality is higher among the unmarried than among the married. The tables in which Bertillon demonstrates the depreciation of the insurance value of the lives of the unmarried as compared with the married are drawn not only for France, but also for Paris, for Belgium, and for Holland. For England and Sweden he could not obtain the proper data. The

*Inaugural address as President of the British Gynæcological Society.

figures in the various columns of his extended table are so closely confirmatory of the general results, that it will suffice to look at the French table of the mortality of both sexes at different ages, as that is affected by their being on the one hand bachelors, husbands, widowers, or on the other spinsters, wives, widows.

Proportion of Deaths per 1,000 at Different Ages of the Unmarried, Married, and Widowed.

Ages.	Bachelors.	Husbands.	Widowers.	Spinsters.	Wives.	Widows.
15–20	6·89	51·32	774·	7·53	11·86	112·31
20–25	12·88	8·92	49 6	8·32	9·92	23·62
25–30	10·17	6·24	21·84	9·02	8 98	16·9
30–35	11·51	6·82	19·17	9 87	9·36	15·03
35–40	13·15	7·52	17·50	10·87	9·29	12·73
40–45	16·62	9·55	18·89	13·28	10·14	13·30
45–50	19·60	11·47	22·2	15·71	10·69	15·20
50–55	25·8	15·61	26·8	20·97	14·11	18·71
55–60	31·1	21·5	34·17	26·90	19·29	24·47
60–65	45·92	32·6	47·5	40·52	30·75	37 07
65–70	58·5	44·8	62·97	58·3	45·3	53·5
70–75	85·1	71·5	95·4	85·5	72·67	86·1
75–80	123·	114·5	143·9	140·5	109·4	126·7
80–85	202 7	182·8	221·8	222·5	172·5	198·
85–90	268·4	228·6	263·05	305	205·1	264·
90–95	282·	279·	319·	314·1	256·3	308·
95–	480·	357·	385·	387·7	416·	324·

These figures give us the proportion of deaths per thousand of the several groups at successive quinquennial periods of life. If for the moment we leave out of sight the deaths in the first quinquennium where the individuals were under twenty years of age, we observe that the mortality of the central group—the married people—is markedly less than the mortality of the group on either side. This is more distinctly seen in the case of the men, among whom between the ages of twenty and twenty-five there is a mortality of 12·88 per thousand among bachelors, and 49·6 among widowers; and only 8·92 among married men. The difference is still more striking at a more advanced period of life, as between the ages of forty and forty-five. At that age there is a mortality among married men of 9·55 per thousand, whilst among bachelors the mortality amounts to 16·62, and among widowers to 16·89 per thousand. It can, as Bertillon further indicates, be put in another form. If we take the numbers in a community, that at a given time would furnish 100 deaths among the married men, and ask what is the mortality among the same number of bachelors and of widowers we find that for 100 married men who die between the ages of thirty and thirty-five, there die, of bachelors 169, and of widowers 281. Between the ages of thirty-five and forty the proportion is—175 bachelors, and 233 widowers to 100 married men; between forty and forty-five, 174 bachelors, and 198 widowers; between forty-five and fifty the figures become 171 and 194; between fifty and fifty-five 165 and 172. The figures show that among bachelors there is a rise in the relative mortality till between the ages of thirty-five and forty-five, after which it gradually declines.

The result of Bertillon's statistics is to show that the conjugal association, provided it is not prematurely entered on, is salutary to both sexes, though it is the husband who benefits most from the union. The dangers of childbearing neutralize its benefits to the female up to the age of twenty-five in France, and in Belgium and Holland even up to the ages of forty or forty-five. "The comparison," he says, "of the vitality of married women and widows above the age of fifty with that of spinsters is very significant. It shows that the dangers of maternity are prolonged beyond that time of life. A woman who, by her celibacy, has deprived her organs of their special function, who has denied to her youth the pleasures of love, and the labors and joys of motherhood, has not thereby insured her old age against the dangers peculiar to it, but, on the contrary, she remains more exposed to them. Love and motherhood, in the salutary conditions of marriage, far from exhausting vitality preserve and protect it in the present and in the future, because in France, the mothers of families, wives, or widows, at every period of their existence after the age of twenty-five pay a smaller tribute to death than the spinsters of corresponding age."

Other interesting points are the comparative immunity of married persons, in respect of suicide and insanity, and the small relative proportion contributed by married persons to the criminal population.

When such statistics are before us we are prepared for an outburst like this from Thuliè (*La Femme*), who writes from a purely natural history and evolutionary standpoint, in dealing with the question of voluntary sterility, and asks, "This

sterility which is a shame in the eyes of men who obey natural instincts, and a glory for the ignorant metaphysicians of Christendom—what is it for modern sociologists, who base their doctrines on the knowledge of man, and not on revelation?" and he answers, "From the point of view of the individual it is an infirmity; or if the sterility be really voluntary, it is a fault which deprives the human being of joys the most profound and pure, and removes the most powerful impulse to exertion and activity. From the point of society, it is, for the races affected by it, a fatal decrepitude and, after the lapse of a longer or shorter period, their disappearance before the strong and prolific races. From the point of view of humanity, it is a danger, or at least a delay, in the progressive evolution of the race." At any rate we can see that those who try to evade the laws of physiology, which require the multiplication of the race do so under penalties such as nature teaches us always to expect to follow any rebellion against her laws.

Passing on to discuss the "physiology of marriage," we must examine the effects of the different methods, (1) in respect of fertility, and (2) in the respect of the offspring.

COMMUNAL MARRIAGE.

Of all the methods that have been sanctioned or proposed for the propagation of the race the worst is that which has been designated the "communal" or "promiscuous" or "free-love" union of the sexes. Westermarch, in his recent elaborate work on "The History of Human Marriage," tries to prove that no such custom prevails or has prevailed, though Lubbock, Bastian, and many others had formed the hypothesis that such had been the case with primeval man. But then his eagerness to establish his own hypothesis, that we derive our origin from monogamous apes, leads him to minimise the evidence on the other side, and even if it be, as he maintains, a divergence from the archaic custom, something very like communalty prevails among the North American Indians and South Sea Islanders, where it is seen to eventuate in sterilization of the women, and death or destruction of the infants. So that Thuliè says of it, "Children are scarce where the man is only a fertilizer." The mischief of it is seen nearer home in the promiscuity of the abandoned women. Were London decimated no physiologist could expect, as no philanthropist could wish to see its ranks filled up by the offspring of its forty thousand prostitutes. "Il ne pousse pas d'herbe dans les chemins où tout le monde passe," says Bertillon.

POLYANDRY.

Polandry is perhaps not far removed in its deleterious effects from communalty. It is said to prevail in some poor regions as in Thibet, among the Esquimaux, where the co-associates are usually brothers, the eldest of whom chooses a wife for the party. This kind of union is incompatible with fertility. The woman may be mistress of a household, but she has all the responsibility, trouble, and fatigue of the management, and when she dies in childbed, or soon after, the child so often perishes that the custom has grown up among some polyandrous people of burying with the dead mother the child that has not arrived at the stage of development when it can feed itself.

POLYGYNY.

Polygamy, or rather polygyny, though a distinct advance on polyandry, is still when measured by the rule we are applying an unphysiological institution. The women of the seraglio are in no wise fertile. The master may be the father of many children, but the individual wives have relatively few, and hence it is found that the birth-rate in polgynous countries is inferior to that of the populations where monogamy prevails, while the infantile mortality increases. There is thus a tendency to diminution in the numbers of polygynous populations, who are often warlike in character, and keep up their supply by raids on neighboring tribes, or by the purchase of slaves.

MONOGAMY.

Bertillon defines marriage very fully as "A synallagmatic (mutually consenting) and authentic (openly acknowledged) contract to constitute a family by which the pair, besides the sexual relations, assure each other of community of life, of effort, of interest, and of conscience with a view of mutually providing society and

material and moral support, and of securing the proper upbringing of their children." It is in such a monogamous union, in obedience to the law of "one with one mutually consenting and openly contracting," that we find the surest guarantee for the maintenance and multiplication of the race. The products of such a union are more numerous; they are healthier; they have better chances of being reared successfully. This will come out more clearly if we look at some of the consequences of infraction of this great law. Some of these consequences may fall on either of the individuals who break the fence that Nature has set around the procreative processes. But we concern ourselves here with the consequences of the female.

DANGERS OF INFRACTION OF LAW.

We ask, What are the risks to a woman yielding herself to a seducer, *i. e.*, to a man who has not openly declared his readiness to assume martial responsibility.

1. She may become tainted with *syphilis*. Of course, this might happen to a woman formally married, who had not been careful to ensure herself against damaged goods in the making of her bargain. When the day comes for the righting of the wrongs of women the law will do something to protect her from this injury, or compensate her where it has been inflicted on her innocence. Assuredly if it had been the rule that this disastrous element was introduced into the marriage contract by the wife instead of being, as in the case, the rare exception, we men would long ago have found legal means of freeing ourselves from partners whose condition was a danger to us and our offspring. However this may be, the unmarried woman is in danger from infection, whether by inoculation of a primary sore or transmission through a tainted ovum, and how mischievous the syphilitic virus is in aggravating many female disorders and in lessening the powers of reproduction is but too well known to every general practitioner.

2. She may contract a *gonorrhœa*. Up till a recent period this would have been regarded as a comparatively trifling ailment, and in some text-books on surgery it is still too slightly dealt with. But since Noeggerath published his remarkable pamphlet in 1872 on "Latent Gonorrhœa" gynæcologists have become more and more alive to the pernicious effects of this often insidious malady, and Professor Sinclair and some others have shown its virulence in initiating some of the most painful and protracted illnesses of women, and leading all too often to their hopeless sterilization.

3. She may become *pregnant*. Escaping the pathological risks of illicit intercourse the physiological result may follow, and she finds herself impregnated. There is no time at which she can be sure that conception will not follow the insemination. If she counts on an agenetic period she may be mistaken; if on preventive measures they may fail her; and that which to her married sister brings the brightest hope befalls her as the darkest dread.

In her unsheltered solitary state the ordinary dangers of pregnancy and parturition and the puerperium are all aggravated by many degrees. The woman who has become impregnated within the physiological limit is surrounded with all the guarantees for health and safety. She has a nervous system that is calm, or subject only to the exhiliration of anticipated joy, her circulation goes on steadily, or is healthfully stimulated at times to more activity: food, clothing, and every comfort are at her command. She can give due attention to the state of her emunctories. On the other hand, nervous depression, circulatory disturbances, imperfect food and clothing, and frequent contradiction of the ordinary conditions of health are the lot of the woman to whom pregnancy has come outside the limit. Hence the tendency to melancholia, to convulsions and other grave disorders of gestation, and the risks of a higher childbed mortality, and where her life is spared she is more likely to come out of her lying-in-room the subject of disease or damage that might be a source of life-long trouble.

Then when we turn to consider what the chances are to her infant we see that the risk is great of its being still-born, or that it may be delicate or difficult to rear. In France the difference between the still-birth rates respectively of legitimate and illegitimate children is enormous. According to Bertillon the proportion is as 100 to 193. Transgression of the law that requires open recognition of the union between parents almost doubles the mortality of the pregnancy at birth. If we follow

the fate of the living children born of unmarried women we find that whilst in 1,000 legitimate births 35.12 of the infants die in the first week, in 1,000 illegitimate births 63 of the infants die within the week. Within a month the mortality among legitimate children amounts to 74.7 per 1,000, amongst illegitimate to 170 per 1,000, and while the legitimate children have a mortality of 175 per 1,000 in the first year after birth, the mortality of illegitimate children within the same period is 337 per 1,000.

To have determined the kind of marriage relation that is most conducive or successful to propagation does not, however, exhaust the duty of the gynæcologist who is consulted as to the best conditions under which the relation may be entered on. He has to consider further, *e. g.*, the question of

1. *The Marriageable Age.*—Bertillon's tables show that mortality of married males prior to the age of 20 is extremely high. At all the ages beyond, as we have already seen, the marriage relation exerts such a favorable influence on the life conditions that the mortality among the married men is far below that of the bachelors. But on the contrary, when marriage is entered on before the age of twenty it has a prejudicial influence on life and whereas the mortality among unmarried youths between the ages of fifteen and twenty is only 6.89 per 1,000, those who marry under twenty, usually between eighteen and twenty, are at the rate of 51.32 per 1,000. Where among the unmarried youths the mortality is only 14, among the married it amounts to 100. Bertillon believes that the beneficial influence of marriage which is so marked at the age of twenty-five and upwards is "still considerable," "still manifest" and twenty-three, perhaps "still sensible" at twenty-two, but would cease at twenty-one. "Who can object," he asks, "to the conclusion that these early marriages are deadly, that the law which permits them is a snare which the ignorance of the legislator has spread for our youth, and that this bad law should be abrogated?"

The danger of early marriage is not so pronounced in the case of women, and the beneficial influence does not begin to show itself so early as in men. The table shows us that the proportion of deaths per 1,000 for the unmarried between the ages of fifteen and twenty years of age is 7.53, and for the married at the same age 11.86. There is already an improvement between the ages of twenty and twenty-five at which the majority among the unmarried is 8.32, and among the married 9.92. It is the danger of parturition, and especially first labors, that keep up the mortality among married women during their productive life, but we can see that these dangers become attenuated as they advance in years, and the figures show us very distinctly how specially dangerous it is to enter prematurely on the reproductive career. Whilst the relative mortality of spinsters and married women between the ages of twenty and twenty-five years is as 100 to 119, their relative mortality between the ages of fifteen and twenty is as 150 to 158 in France. The proportion in Holland is 100 to 208, so that there a young woman marrying before the age of twenty doubles her chance of death. When we know besides that the products of these early marriages are apt to be more feeble and difficult to rear, and that women who marry early are likely as not to have fewer children, we conclude that it is not advisable for a woman to contract a marriage before the age of twenty. In general terms we may say that after an individual has passed the first septennium of life and has got the permanent teeth, during the second septennium the building up of the system goes on which prepares for the evolution of the several apparatuses. This occupies the third septennium, so that it is only at the age of twenty or twenty-one that the pelvic organs with the associative mammæ are fairly ripened and capable of carrying out their function. And as it has required all these years for the full physical development of the woman, so in her physical training we cannot expect of her at an earlier period to be able clearly to apprehend the relations on which she is entering, and intelligently to face the lofty requirements of motherhood. Of course, in all these data we speak of averages, and in the corporeal and mental development of women we may find diversities in the data of their completion just as there are differences in the date of the eruption of the first teeth in infancy which we would look for at the seventh month, though in some infants they appear earlier and in others later. So we may meet a

wise and well developed woman of eighteen whose marriage we might conscientiously sanction, whilst we might have grave doubts as to its propriety with a giddy girl of thirty. "In women," says Matthew Duncan, "the age of maturity is twenty to twenty-five, in men it is later, probably by at least five years, and you will pardon the interpolation here of the reflection, well worthy of being dwelt on, that this lately ascertained physiological law tallies with the oldest and wisest counsels as to the nubility of men and women, a part of the grand subject of morals and medicine. At this age a woman has the lowest risk of sterility, the greatest likelihood of having healthy children that will long survive, the greatest likelihood of herself surviving childbirth, the lowest risk of having abortions, of having excessive family, of having plural pregnancy and of bringing forth idiots."—*Lancet* 1889.

It is not in the ill effect on the individual that the mistake of premature reproduction appears, but in the imperfect development and low vitality of the products of such unions, evils that show themselves in modified forms again in the children of those too advanced in life. The differences of the two classes are summed up by Dr. Strahan in his recent work on "Marriage and Diseases," as follows:—"The children of *immature* parentage are especially liable to death during infancy from wasting, scrofulous and convulsive affections. They are liable in a remarkable degree to idiocy and imbecility of a low type, and to physical deformities and imperfections. Large numbers of them succumb to tubercular disease about the age of puberty and adolescence, and few of them attain even advanced middle age. The genital organs are ill developed and often deformed, and a great number of them are sterile. They are also notorious for their lack of energy and courage. Hence the class of criminals to which they give the greatest number of recruits is that of thieves and other petty offenders. The children of the *senile* are as a class ugly, small of stature, and stooping, which, together with the absence of subcutaneous fat, gives them a look of old age while still young. Idiocy is less common among them than weak-mindedness, amounting to imbecility, which is often accompanied with more or less perversion of moral feeling, and a plentiful supply of low, deep, cunning. Many of them die between the ages of puberty and adolescence of tubercular diseases, few of them live past middle age, and a great number of them ultimately become insane and criminal. They are nervous, irritable, passionate, and horribly cruel, and are the perpetrators of most of those fiendish barbarities, the recital of which from time to time shocks the civilized world."

2. *Physical bars to marriage.*—Besides the determination of the age of nubility it belongs to the gynæcologist to consider what physical conditions are to be regarded as contra-indications to the marriage relation. Regularity of the menstrual flow may usually be taken as a sign of fitness for procreation, though it may consist with morbid conditions, such, for example, as deformities of the pelvis that would under the process prove dangerous to both mother and child, and that would make it inadvisable for the affected individual to marry. The irregularity or absence of the flow ought always to be taken as a possible indication of the presence of some condition that will inevitably cause an infertile union. Some of the associated conditions may be remedied, such as an imperforate hymen; but we have all seen cases where the marriage knot should never have been tied, of congenital atresia vaginæ, or infantile, or otherwise imperfectly-developed uterus, and the fruitless union has been a mutual disappointment. From such distress the gynæcologist could in almost every instance save the parties if only the people were taught enough of physiology to understand the circumstances that ought to lead them to seek his counsel.

Besides the malformations of the generative apparatus there are other organic defects or constitutional tendencies that ought to make our patients pause before they encounter the risk of reproduction. Dr. Robert Barnes has repeatedly, with characteristic lucidity and vigor, and with abundant wealth of illustration, demonstrated how searchingly a pregnancy will test the vital powers of women, calling out latent tendencies, aggravating already existing disorders, and adding an element of danger to otherwise trifling maladies, and there are some of these, such as recently acquired incompetency of the cardiac valves, especially the aortic, in which to withold the warning as to the dangers

of parturition would be downright cruelty.

In regard to this matter, also, we have not only to keep in mind the consequences to the wife, but to anticipate the influences on the offspring. This opens up the wide field of heredity, which bids us to remember that a woman who is the subject of some infirmity may not only suffer for herself in the reproductive process, but may transmit her weakness to her children. So great is this risk in the case of mental disturbances that Maudsley has said, "If we are seriously minded to check the increase or lessen the production of insanity, it would be necessary to lay down rules to prevent the propagation of a disease which is one of the most hereditary of diseases." Strahan insists that "all men and women who have been insane once, and have a bad family history, those who have been twice insane, even if the family history be good, and all who are confirmed epileptics or drunkards, should be prevented by the State from becoming parents, for," he maintains, "they have no greater right to carry suffering and contamination amongst the people and throw expense upon the State than has the person suffering from small-pox to do so by travelling in a public conveyance." It is not only in the aggravation and propagation of neuroses, such as insanity, epilepsy, drunkenness, idiocy, deaf-mutism, and such-like that we see the ill effects of injudicious unions. They are seen also in the transmission of dangerous diatheses, such as the cancerous, tuberculous, syphilitic, and rheumatic, which are apt to determine the production of children prone to death, all the more if the parents have any close degree of consanguinity, or if they are both in any marked degree the subjects of the diathetic influence.

3. *Regulated Marital Intercourse.*—The gynæcologist has to consider not only what may be the proper age for entrance on the reproductive career and the physical conditions, local or constitutional, that may be an embarrassment or even an actual bar to the process, he has to be ready to indicate the conditions under which it may be healthily carried out. According to Herbert Spencer the progressive evolution of the race proceeds under the varying influences of what he speaks of as individuation and genesis. In the former term he includes all the race-preservative processes by which individual life is completed and maintained; in the latter the processes that go to the formation and perfection of new individuals, and he shows that individuation and genesis vary inversely, genesis decreasing as individuation increases, but not quite so fast, so that progressive evolution in the direction of individuation is associated with a diminishing rate of production. This might at first sight seem to sanction the idea that the married pair might be encouraged to rapid reproduction for the multiplication of the family. But we have to keep in mind what has been indicated by Eddes and Thomson, in their remarkable work on "The Evolution of Sex," that "the survival of a species or family depends not primarily upon quantity, but upon quality. The future is not to the most numerous populations, but to the most individuated." This consideration suggests to us the warning that the pair who would build up a family must see to the production not of many children, but of a moderate number of children, who are more likely to be healthy, and for whose up-bringing they are more likely to be able to provide. The experience of every physician must confirm the authors I have quoted, when they deem it "essential to recognize that the ideal to be sought after is not merely a controlled rate or increase, but regulated lives. Neo-Malthusianism might secure the former by its more or less mechanical methods, and there is no doubt that a limitation of the family would often increase the happiness of the home; but there is danger lest, in removing its result, sexual intemperance become increasingly organic. We would urge, in fact, the necessity of an ethical rather than of a mechanical prudence after marriage, of a temperance recognized to be as binding on husband and wife as chastity on the unmarried. When we consider the inevitable consequences of intemperance, even if the dangers of too large families be avoided, and the possibility of exaggerated sexuality becoming cumulative by inheritance, we cannot help recognising that the intemperate pair are falling toward the ethical level of the harlots and profligates of our streets."

THE DIM AND DISTANT FUTURE.

Gentlemen, if William Hunter's eulogist was rather gallant, than absolutely ac-

curate, in saying that, "the faults of women are the work of men," there is enough of sober truth in the averment to suggest to us the obligation that lies on us, as men as well as gynæcologists, to do our utmost to mitigate the ills that come to women so often from their submission to the stronger sex. As this Society has already done good service in the discovery of means to recognise and remedy the diseases of women, so we are confident it will continue and extend its beneficent operations. But gynæcology and gynæcologists will only have rendered their full service to their subject when they have secured such intelligent apprehension of the laws that regulate the physiology of reproduction, and such implicit obedience to these laws, that a race shall have been evolved that will be independent of their aid. The time is long, and the way far, to such a consummation, but our Society and we ourselves shall only achieve our cest while we keep in view the highest of ideals.

A THEORY OF THE FUNCTIONS OF THE SINUSES OF THE FACE, THE CELLS OF THE ETHMOID, AND THE MASTOID APOPHYSIS.

Coüetoux (*Ann. des mal. de l'oreille et du larynx*, xvii,3) gives the following epitome of his views on the above subject: The ethmoid is primarily a respiratory and olfactory organ. The sinuses of the face share in this rôle and later diminish its influence. Olfaction seems to owe its mechanism to the alæ of the nose and the vault of the palate. The ethmoid aids in the formation of the nasal fossæ, and preserves them from the deforming efforts of aspiration in diffusing them. The moist and overheated air which it contains pushes the odoriferous particles toward the convexity of the middle turbinated bone. The sinuses, being developed with the olfactory sense, share with the ethmoid in its functions of diffusing the deforming effects of the negative pressure due to olfactory respiration. In the adult the sinuses leave to the ethmoid the first place. The mastoid cells relieve the tympanic membrane from the deforming effects of the barometric vacuum, which is due not so much to the olfactory respiration from which the narrowing of the eustachian tube already protects it, as to the effects of this narrowing, which coincides with the development of olfactory respiration.

DYSMENORRHŒA AND PAINFUL OVARIES.

By A. E. WARREN, M. D.
GIRARD, OHIO.

The term dysmenorrhœa is generally used as meaning pain before, during, or after menstruation. During my experience I find physicians treating this pain as a symptom with such drugs as antikamnia, phenacetin, and opiates; many physicians become accustomed during their busy period to prescribing indiscriminately, not asking as they should for a cause, but hurriedly giving anything to alleviate pain for the time being.

Let us for a moment refer to some of the causes of dysmenorrhœa which prevails more especially among society girls. The normal menstrual flux is generally accepted as an overflow, and any uneasiness during this period is abnormal, e. g. imagine the os internum closed, either with cicatricial tissue, new growth or a firm spasmodic contraction. This causes a daming back of the normal overflow, a distension and pressure on nerve endings. Menstruation being caused by a change in the lining of uterus, any retention of blood pressing on these already vascular, and irritable tissues causes pain. There also may be atresia of vagina; an imperforate hymen; disease at or near os internum; anything arresting growth of generative organs, retroversions, anteflexions—all these abnormal conditions and malformations cause a backing up and retaining of the normal monthly flow. W. G. Wylie in his article on menstruation, and its disorders (Mann's Gynæcology) says, "A uterine sound that could be passed into a normal uterus without pain, would cause severe aching pain (similar to that of menstruation) if passed into the uterus of a patient suffering from dymenorrhœa." From this we might be led to believe that it was the passing of the secretion over this irritated part that caused the pain, but in a great majority of cases the pain ceases at the appearance of the discharge. Whichever of the above mentioned causes may be operative, the profession, I think, will agree with me when I say obstruction, whether from disease or malformation, is the leading one, and that it is to the treatment of this class of cases I want to draw your attention.

Case: Miss H., aged eighteen, came to me April 1 suffering with pain in right side over the region of the ovary. This pain dated back one year, she had since the beginning of her first menstrual period four years previous, suffered with dysmenorrhœa so severe that she would be confined to bed two and three days prior to the appearance of the flow; the pain in right side was continuous but exaggerated at each monthly period. At the time Miss H. came to me, five days after her monthly sickness, she was very nervous and somewhat anæmic; her occupation requiring considerable brain work. I had her give up her position, and put her on the following tonic:

℞
Ferri. Red.....2. grammes.
Zinci. Val.....2. grammes.
Acidi. Ars.....0.05 grammes.
Strych. Sulph.....0.05 grammes.
Quin. Sulph.....1. grammes.
Ft. Capsules xxx.
Sig.—One, three times day.

I told her to return to me ten days prior to next menstrual time. I then ordered a douche, of 120°F, or as hot as she could bear, every day until the flow appeared. I also prescribed on the day previous to the menses capsules every four hours, containing in each, aloin 1/8 gr., ext. ergot 1/2 gr. The douche, softening, relaxing and causing a congestion; the aloin I prescribed to congest, the ergot to contract. Five days after she returned stating she experienced no pain before or during sickness, but still suffered from pain in the right side, the area of which could be covered with a silver dollar. I decided this was an irritated ovary from long-standing dysmenorrhœa. Absorbent cotton saturated with a solution of ichythol, grammes 8 to glycerine 60, was intoduced into vagina and left three days, and repeated until time to begin douche, which was repeated for the second time. This period passed over without pain, the pain in side ceased; since then the patient has been entirely well. Later I used the same treatment on four other cases, with a complete cure in each case.

COPPER IN ADYNAMIC ANÆMIA.

Luton and Liegeas have found copper (*Prog Med.*) of value as a tonic alterative nervine. Pearson (*Medical Standard,* Feb., 1892) points that in adynamia, a kind of nervous asthenia, copper is of value, as it stimulates the cardiac and capillary circulation and acts as a nervine tonic.

Society Reports.

CLINICAL SOCIETY, OF LOUISVILLE.

Stated Meeting June 21, 1892

Dr. J. M. Mathews, president *pro tem*, in the Chair.

CASE OF OVARIAN TUMOR.

Dr. W. O. Roberts: The patient from whom this specimen was removed is in her sixties—sixty-two or sixty-three, does not know her exact age; she is an exceedingly fat woman. There have been removed from this patient at different times, four tumors from the breast. I removed the last one, which was eighteen years ago; examination showed it to be a malignant growth; there has been no recurrence. About three years ago she had an umbilical hernia a portion of which was irreducible and gave her a great deal of pain. I operated upon it and found the irreducible portion to be omentum, which was tied off and the opening closed. She got along without any trouble for a year, then there was a recurrence of the hernia and I operated again with the same result. The hernia recurred again and grew rapidly, so that at the time of the last operation, a few days ago, it was nearly as large as a hat crown. When I cut down upon it I found the intestines, especially the large intestine, adherent so that it was with some difficulty I was able to detach it. After it became detached she had a violent vomiting spell, and a large amount of intestine protruded through the opening. In replacing the intestines my hand came in contact with a solid body, and upon examination it proved to be an ovarian tumor, which was removed. It was a simple multilocular tumor, the largest cyst of which was tapped, and I suppose about a quart of fluid came out of it, a thin gelatinous fluid; you will notice there are several smaller cysts. This tumor was not suspected prior to the operation for hernia, and but for the fact of the patient vomiting and expelling the intestines through the opening, I suppose it would not have been detected during the operation.

TUMOR OF THE BLADDER.

I also have a tumor which has already been exhibited to one of the Medical Soci-

eties, but as it and the history of the case is of considerable interest, and as there is a very important point in connection with the case that has come up since report was made to that society, I would like to again mention it: The patient from whom the tumor was removed is a man fifty-seven years, of age, and a patient of Dr. Palmer's. He had been troubled for some months with frequent and difficult micturition and last January became unable to urinate at all, so that a catheter had to be used. I saw him in March and up to that time he had been unable to void his urine, catheter had to be used sometimes every half hour during the day and very frequently at night, his urine was loaded with pus. We made an examination under chloroform, found no stone but there was some little difficulty in getting into his bladder and we were under the impression that he had an enlarged middle lobe, the lateral lobes did not seem to be at all enlarged, He He was put on boric acid internally and locally, and he returned to the city about the middle of May very much improved as regards the condition of his water, also as to the frequency of need to use the catheter. He would go from two, to three hours without using the catheter. We advised a suprapubic cystotomy, which operation was done at the Norton Infirmary. When we reached the interior of the bladder, we found a tumor about as large as the first joint of your finger, that completely closed up the neck of the bladder. It was a pedunculated growth. I caught it with forceps and in pulling it tore off a considerable sized piece, and then afterward picked it off little bits at a time until it was entirely removed. After the operation I used the kind of drainage tube which is used by Keyes, of New York, whether it is his original idea, or not, I do not know but it is an excellent tube. This man remained in the hospital I think for two weeks, possibly a little longer. When he left for his home the urine was still being passed through the abdominal wound. The drainage tube was taken out, or rather it came out in an effort to vomit, and in attempting to replace the tube it gave him so much pain I desisted and finally concluded to leave it out altogether and see whether or not after closure of the wound he would be able to void his urine the natural way. He returned to his home as I said about two weeks after the operation, and a day or two ago I received a letter from Dr. Palmer which was written by the patient's son, a doctor, graduate of Jefferson College, under date of June 16th, a little over a month after the operation, as follows: "My father is doing very well indeed, the wound is almost closed, passes urine the natural way with but little leakage through the abdominal wound, then only when he is urinating. Has to get up only a few times at night to empty his bladder. There is still some pus in the urine. He passes urine with sufficient force to throw it at least three feet from him."

I think this is of great interest in view of the man having had retention of the urine for so long a time.

Dr. S. Flexner: (of Johns-Hopkins Hospital Baltimore) I would like to ask Dr. Roberts whether this tumor did not spring from the inside of the bladder. I understand it has not yet been examined. The commonest form of tumor springing from the mucous membrane of the bladder is the papilloma. This does not appear to be a papilloma. I think it would be very desirable to have an examination made so as to know the exact nature of the tumor.

Dr. W. C. Dugan: Was there any serious hæmorrhage at the time of operation, and if so how was it controlled?

Dr. W. O. Roberts: The hæmorrhage was very slight; I used only hot water.

PUERPERAL TETANUS.

Dr. J. W. Irwin: The patient of whom I shall speak was not quite seventeen years of age. She was sent to me from another city. I saw her for the first time in January, 1892. She had reached the ninth month of utero-gestation with her first child. She was of medium height, strong and healthy, of dark complexion and weighed 130 pounds. Her previous history did not reveal any hereditary nervous or mental disorders, or troubles of any kind. The organs of digestion were in a healthy condition, there was no œdema, the kidneys were found to be free from disease. On February 13th at full term she gave birth to a female child which weighed seven and one-half pounds. The labor lasted nine hours and was less severe than is usually the case in primiparæ. The amniotic fluid was not excessive in quantity, and the abdomen was unusually enlarged. The placenta came away eighteen minutes after the birth of the child. Very little

hæmorrhage occurred. All clots and shreds of membranes were carefully and thoroughly removed. The vaginal tissues were found to be free from abrasions and there was no laceration of the neck of the womb. The patient had not been exhausted by the labor.

Thirty minutes after the birth of the child the patient became very weak and faint, and the action of the heart grew slow and feeble. Evidence of internal hæmorrhage was sought for and none found. The patient's head was then lowered beyond the horizontal line of the body but the alarming condition continued for fully forty minutes. My esteemed friend, Dr. Washen, was sent for to see the case in consultation, but, on his arrival, the patient was revived. A careful examination of the case failed to discover the cause of the alarming symptoms. There was no cardiac disorder and the kidneys were found to be free from disease. The patient had been well nourished and had not been exposed to cold or dampness.

From this time the patient did not have a symptom indicating any disturbance until on the morning of February 24th, or eleven days after her confinement, when she felt a choking sensation in the throat and a fulness about the jaws. She had pain in the back and the head was drawn slightly backward. There was a sense of tightness around the waist and in the chest. She complained of a tremulous feeling and at the same time the body was drenched with perspiration. On the night of February 24th, the patient did not sleep owing to severe paroxysms of pain in the back, which at times encircled the body. On the morning of February twenty-fifth, the jaws had almost closed. Barring an occasional attack of trembling in the masseter muscles, the muscular contractions about the face were permanent. The muscles of the back, chest and abdomen were firmly contracted and accompanied by a feeling of suffocation. Respiration was irregular and only twelve to the minute. The lochia was unaffected. The axillary temperature was 102⅖° F. The urine was scanty and of a dark brown color and it did not contain albumin. Pain in the back and chest was continued but it was more severe in paroxysms. There was much hyperæsthesia present and exposure to temperature of 70 degrees caused the patient great discomfort. The bowels were sluggish but small doses of saline laxatives caused free movements.

The expression of the patient, as well as her general condition, showed that something more severe than an ordinary fever had attacked her. The face wore the expression of intense suffering. The occipito-frontalis muscle was contracted tightly, which caused the flesh and skin over the forehead to stand out in numerous hard bunches, between which were deep fissures running in every direction. The brows were drawn downward and inward which gave to the eyes a sunken appearance. The muscles of the nose, cheeks, lips and chin were in a state of contraction like those of the forehead. The wings of the nose were drawn outward and upward, which gave to that organ a flattened appearance. The eyes were suffused and the lids were so much contracted as to cause the impression that they were too short to cover the balls.

On February 27th at nine A. M. the temperature was 100⅖° F., pulse 124, weak and irregular; at nine P. M. temperature 101⅕° F., pulse 130 and feeble. Perspiration now occurred in paroxysms and after severe attacks of pain. Hyperæsthesia was more felt. Pain and contractions of the muscles of the back were more severe at night. Frequent paroxysms of nervous trembling attended by copious perspiration prevented her sleeping. February 27th at nine A. M. pulse 129, respiration 16 and irregular, temperature 100° F., at nine P. M. temperature 101⅕° F., pulse still irregular and feeble and patient on attempting to move or turn in the bed had attacks of pain accompanied by oposthotonus. From this time until March 16th the condition of the patient remained practically unchanged. Twice within the previous sixteen days the patient's temperature fell to 96°. F. in the morning, but as evening approached it went up to 99° and 100° F. At no time during the course of the disease did the patient's temperature exceed 102⅖° F., and this occurred once only, at the beginning of the attack. The temperature usually ranged between 99° and 100° F. The pulse varied very much in numbers and character, at times 108 and 160, irregular, and quite feeble.

On March 16th the jaws became

relaxed and the mouth could be opened without much effort to the extent of admitting the handle of a spoon.

The muscles of the chest and back had become relaxed and the paroxysmal contractions occurred less frequently. Pain was not as constant. At the end of six weeks from the beginning of the attack the patient was allowed to return to her home. A letter was received from her bearing date of April 14th saying that she was entirely well.

The treatment of this patient, owing to the fixed condition of the jaws, presented some difficulties but the absence of an upper molar tooth made the task much easier than it otherwise might have been. The act of swallowing was difficult and painful and occasionally fluids escaped through the nose, The diet consisted of milk, consomme, liquid peptonoids, and strained soups. To this was added from six to eight ounces of whiskey daily. The hypodermic use of one-half grain doses of sulphate of morphia as occasion required for relief of pain, was found to be servicable. Insomnia was a troublesome concomitant of the disease, and this condition I found to yield to twenty grain doses of the hydrate of chloral, every second hour, better than to any other remedy. Sulphonal and chloralamide were given without any effect.

Later in the disease a mild, continuous current of electricity was applied to the spine, but as it caused too much pain, its use was abandoned.

Iron and quinine were given in tonic doses with apparently good effect.

From the description of the case I have just given, it will be observed as one of those rare affections following parturition, known as puerperal tetanus. In looking over the literature on this disease, I find that many obstetricians have never seen a case of puerperal tetanus. In Galabin's Midwifery, page 698, I find the following statement: "Puerperal tetanus is extremely rare, (in Great Britian), no instance of it occurred in 47,089 cases in Guy's Hospital Lying-in Charity."

From every source, including the carefully collected cases of Dr. Garrigues published in the *American Journal of Obstetrics*, volume 15, page 769, I find only thirty-two instances recorded as having occurred after full term in Europe and America during the last one-hundred years. Currie reported to the Medical Society of London the first case in 1792.

The disease occurs more frequently in hot countries and the mortality is very great. Parvin's Obstetrics, page 598, gives the mortality in hot countries as $80\frac{4}{10}$ per cent. The mortality in Europe and America in cases occurring after parturition at full term is $84\frac{4}{10}$ per cent. These remarks do not apply to tetanus occurring after abortion, for, in such cases, the mortality is even greater. Twenty-eight recorded cases of tetanus following abortion show a mortality of $92\frac{8}{10}$ per cent.

Until within the last few years the cause of this terrible disease was thought to be difficult labor, the retention of membranes in the womb, nervous excitement, mental distress, and exposure to cold and dampness. Climate, it was thought, conduced much to the number of its victims.

In 1885 Nicolaier discovered the cause of tetanus to be a bacillus which corresponded to the Koch bacillus of the septicæmia of mice, which is especially found in horse dung. Rosenbach, in 1886 confirmed the discovery of Nicolaier and from their combined evidence, the disease, it is now believed, is infectious in character, and communicated chiefly from horse dung.

Dr. J. A. Ouchterlony: The paper read by Dr. Irwin is extremely interesting, not only because of the rarity of the disease, but because of the fortunate issue. The best resumé of puerperal tetanus or tetanus occuring in connection with abortion, labor and in non-puerperal state in woman that I have ever read is that of Prof. Simpson, which is found in his miscellaneous works. He reports quite a number of cases as having occurred, not only in connection with labor at full term, but also after abortion. A very interesting report of a case that he gives is that of a woman who had an intra-uterine polypus. He describes it, if I mistake not, as a cellular polypus, that it was extending into the vagina and came away almost without any effort at assistance, so that there was no damage done to the parts by surgical procedure; that a few days after the exit of the polypus, tetanus developed and the woman died. The number of cases of abortion followed by tetanus that Simpson reports is quite considerable in view of the rarity of the disease. In the cases that occurred after

labor, my recollection is that it was observed quite as frequently in women who had not particularly hard labor, and where there had been no instrumental interference.

The only point I want to call attention to is one relating to the prognosis: Whenever the disease lasts longer than four or five days, it usually terminates in recovery, so that if you can tide the patient over the first five or six days, the probability of recovery greatly increases.

In thinking over the subject it has often puzzled me how to account for tetanus in puerperal women who have seemingly been entirely free from any exposure to what is now considered the cause of the disease, namely the peculiar bacillus. I have studied a number of reports of cases and must confess it was very difficult for me to see how the infection had taken place. The same difficulty, however, is encountered when we try to explain the occurrence of tetanus as an endemic disease. There is what is called idiopathic-tetanus, and it is just as difficult to understand how the infection occurred then. Of course the same thing is true in regard to a number of other infectious diseases. I have never seen a case of puerperal-tetanus.

Dr. S. Flexner: I have been very much interested in Dr. Irwin's report. I have never myself seen a case of puerperal tetanus, and only wish to say a few words with reference to the peculiar bacilli causing the disease. The recent work of Kitasato on tetanus, which is too recent to have appeared in the authorities quoted here this evening, indicated that the *several* organisms originally considered to be the cause of the disease, are not the cause, but that it is caused by a *single* organism. A great deal of difficulty has been met with in the study of tetanus from a bacteriological standpoint, because of the fact that the peculiar bacillus does not grow under ordinary circumstances, but requires the exclusion of oxygen. It will grow in an atmosphere of some other gas than oxygen, hydrogen usually being used to replace the oxygen, and it is hence an anærobic organism. On account of this peculiarity, the bacillus of tetanus is not as easily separated as other germs which grow in the presence of oxygen. The method introduced by Kitasato consists of heating a culture which contains the bacillus of tetanus mixed with other things, to a temperature at which all of the vegetative organisms are destroyed, and, under which circumstances the tetanus-germ gives rise to spores which resist this temperature and may be grown out into form of tetanus-bacilli. The organisms of tetanus have been found in the earth, commonly about stables, often in gardens and tend to grow in particular localities; for instance, certain portions of Long Island are noted from the fact of the development of tetanus following injury in great regularity. With reference to the occurrence of idiopathic-tetanus to which Dr. Ouchterlony referred in his remarks, I cannot help considering that Dr. Irwin's example is hardly one of that class. It seems to me that the case Dr. Irwin reports must be considered as one of the traumatic variety, as the act of parturition itself suffices to produce a lesion which can in some manner become infected. As to the mode of infection—the hands and instruments have to be considered. The danger of infection through the air, while not totally excluded, perhaps, is not nearly so great as the former. The peculiar organisms of tetanus are now known to develop only locally at the seat of the injury; they never invade the blood and tissues, but produce a poison known as the tox-albumin of tetanus which gives rise to the constitutional effects of the disease. The fact of the local development of the organisms indicates to us where antiseptic measures are to be applied, and, moreover, the source of danger in carrying the infection from one to another. It is to be emphasized that all the secretions from the affected part, are to be thoroughly disinfected.

Dr. A. M. Vance: I would like to ask if anybody has any information concerning the contagious nature of tetanus. I ask this question for the reason that some time ago I saw a case which seemed to prove conclusively that it is contagious. In this instance a drainage tube was used on a patient suffering with tetanus, and afterward used on another patient who developed tetanus and died in nine days. I think I had the same year seven or eight cases of tetanus. I am inclined to believe that very often these cases can be traced to cases that have gone before in the same neighborhood, in the same house, etc.

Dr. J. G. Cecil: I have never seen a case of tetanus in the puerperal state. Some time ago, however, I had occasion to look the subject up and was very much interested in it, especially on account of its rarity and its pathology. Many cases, I think, that are otherwise obscure might be traced to the dust of the street. However, I cannot see how the case reported by Dr. Irwin could have been infected from this source. I would rather consider it a case of traumatic instead of idiopathic tetanus I believe that in every woman no matter how complete and easy the delivery, the genital tract is sufficiently abraded and wounded to afford opportunity for the absorption of material, septic and otherwise.

Dr. I. N. Bloom: The micro-organism theory of tetanus was very well established in an instance I recall, where there was a large stable in the vicinity. There had been on an average from ten to fifteen deaths from tetanus in that immediate locality per year. Afterward the stable was thoroughly overhauled and disinfected, and there was but one death from tetanus in a year; after that period for a year or two there was not a case of tetanus, showing the benefits derived from asepsis also proving almost conclusively the theory regarding the origin of tetanus.

Dr. J. W. Irwin: I have very little to say further on the subject, excepting as to the prognosis. Dr. Ouchterlony has mentioned as a fact that if the patient survived four or five days the chances for recovery were greater. I think the most important point touching upon the question of prognosis, is the time at which the patient is attacked by the disease. If the tetanus comes on late after the traumatism, the patient has very much better chances for recovery than when it comes on earlier. In the case I have reported, the disease made its appearance on the eleventh day.

In regard to the question of disinfection: The patient had her own nurse which she brought with her from another city,—a trained, accomplished woman. She made use of a disinfectant solution of carbolic acid and boric acid—about five per cent. of pure carbolic acid in a saturated solution of boric acid. She always washed her hands in this solution after coming in contact with the patient in any way. The water for ablution was always boiled and some of the solution always added to it before being used. No internal washing was practiced, no syringe used for any purpose. In attending the woman, I used carbolated vaseline after first washing my hands in the water and solution above referred to. The patient was confined in a fine, elegantly-furnished house, on the first floor, second room from the front. There was no horse-stable on the place. There was a vacant lot on one side of the house, and plenty of ventilation and plenty of pure air. The house stood within about ten feet of the sidewalk. The street in front of the house was paved with granite, and of course there was a great deal of travel backward and forward over the street. If she took the disease from horse-dung, it is evident that it was deposited on the street and carried by the wind into her room.

Concerning the infection in this case from any other cause: I have not attended a case of tetanus before in eight years, and never before have seen a case of tetanus following parturition. This is the first case in my experience, and I hope it will be the last, although the results are far more encouraging than I had hoped for. I do not think with Dr. Ouchterlony that this was a case of idiopathic tetanus, and I have classed it as traumatic tetanus, the act of labor itself being the cause of the traumatism. No case could have been attended any better so far as antiseptics are concerned, than the case I have mentioned. To show that the patient is entirely well, I will read a portion of a letter recently from her: "I am overjoyed to tell you that I am entirely well and look just as girlish as ever. I will never forget you for your kindness."

Dr. J. A. Ouchterlony: It seems to me that the subject is very much like that of erysipelas. The general belief is that erysipelas is always produced by infection through some abraded surface, and it is very likely the so-called cases of idiopathic tetanus are those in which we have not been able to establish the assistance of trauma, it is possible, however, that it may exist. Of course parturition places woman in a condition most favorable to infection, the abraded surface of the uterus constituting the surgical condition.

SPECIMEN OF OVARIAN CYST.

Dr. L. S. McMurtry: I wish to exhibit a specimen of ovarian cyst, which is not of special interest excepting as a speci

men. Its walls as you will observe are very thin, and I deem myself fortunate in being able to remove it without rupture. The patient from whom this cyst was removed had suffered a miscarriage, and following it had an acute attack of pelvic peritonitis lasting for several weeks. The tumor was found in Douglas' space immediately to the left of the uterus. The left fallopian tube was found to be in a diseased condition, and was also removed. The tumor was but slightly adherent and was detached without difficulty.

Dr. W. C. Dugan: This case is very interesting to me owing to the fact that I operated upon one similar to it only a few days ago.

Dr. A. M. Vance: About a year ago in September I saw first a little boy about ten years of age, and diagnosticated suppurative disease of the hip. The case came under my treatment and ran a very rapid course. There was an abscess and evidences of excessive bone disease. The patient was put in the Children's Hospital three months ago, and the abscess opened and irrigated. At the time the abscess was opened, I spoke of there being very little tissue between the femoral artery and the abscess cavity, and we therefore used no drainage tube for fear sloughing would take place. The boy up to that time had been having a high fever. A few days after this I had a telephone message to come to the Hospital at once, that the patient was bleeding; I told the nurse to put her thumb on the artery at the pubic bone, and hold it until I could reach there. I found upon arrival at the hospital that the femoral artery had ruptured, the boy having lost a great quantity of blood. The vessel was tied by candle light and the limb wrapped in cotton wool and elevated. Gangrene however was present at the end of forty-eight hours and notwithstanding the patient's temperature was 104° and pulse beyond counting, amputation was decided upon. I think Dr. Guest remarked when the boy was on the table that the pulse was, according to his count 170 per minute; that is, he counted a quarter and it amounted to 170 for a minute. Dr. Dugan saw the case in consultation and we decided that there was about one chance in a thousand of saving the boy's life by amputation at the hip. This was done and the time consumed in the operation, from the time the patient was gotten ready until he was taken to another room after the dressings were applied, was about nine minutes.

The boy has about gotten well; I will state that the femur was very much involved, probably about four inches; the acetabulum was also involved; I did not take time to clean it hoping that nature would do so. I believe that if this patient had been kept on the table a few seconds longer he would have succumbed. The child would have died at the time of the hæmorrhage had the nurse not had the courage to have held the artery.

Dr. W. O. Roberts: I would like to ask Dr. Vance if there was any hæmorrhage at time of the operation.

Dr. A. M. Vance: There was very little hæmorrhage during the operation.

CASES OF BRAIN GROWTH.

Dr. W. Cheatham: I wish to simply mention that I have seen three cases of brain growth within two weeks. One case in which a woman had hemiopia; she discovered on waking in the morning that she could not see her child lying on her left arm. The left half of each field gone, the result of brain growth.

SUN-STROKE.

Dr. I. N. Bloom: At the Galt House about a week ago I was called to see one of the workmen who had been sun-struck. I took his temperature and found it registered 109°F. I have brought the thermometer here this evening to exhibit, and you will see it still registers 109°. I had the man wrapped in ice as I understand this to be the most rational treatment for sun-stroke, but the temperature never lowered and he died a short time afterward.

I also want to state that the case of scleroderma I exhibited at the meeting of this Society several months ago, remains exactly as it was at that time, except that all of the rose colored spots visible then have entirely disappeared. I see the case every month or so.

Dr. W. O. Roberts: I saw a case of sun-stroke several years ago which I reported in the *Medical News*. We attempted to take the temperature and the mercury went up to the top of the thermometer 112½° F. in about two minutes. It was a question as to how high it would have gone had the thermometer been longer.

Dr. J. G. Cecil: The report of Dr. Bloom's case calls to mind one that I have recently seen, an invalid child having spinal trouble, which developed into acute spinal meningitis. The temperature was taken on the third day of the acute illness and registered 108½° F.

The patient died on the third day of the illness.

CASES OF TYPHOID FEVER WITH VERY HIGH TEMPERATURE.

Dr. J. W. Irwin: Thirteen years ago I attended two cases of typhoid fever, a boy about nine years of age and a girl eleven, both had temperature of 109¼° F. It did not last long, however, in the boy two and a-half hours, and in the girl three hours. The elevation of temperature came on about the fourth week of the disease in both cases. It came on simultaneously; the children were both members of the same family, and sick at the same time. The heat of the body seemed to be so great that the muscles quivered like the quiver observed in beef after it is skinned. Both of the children recovered.

Concerning the suggestion made by Dr. Bloom, that ice is probably the most rational treatment of sun-stroke, I think Dr. Wood has pretty thoroughly established the fact that there is nothing equal to water. He prefers hydrant water at first to ice, and says it ought to be poured on in a continuous stream, and, furthermore, that it should be long continued, the ice chills too rapidly. There is great danger in reducing the temperature too quickly in cases of sun-stroke, owing to the partially coagulated state of the blood from the sudden heat. The sudden change in temperature by ice might cause death, while the application of cold water at first might be beneficial. I have seen a number of cases of sun stroke where the temperature was 107° and 108°, yet the patient recovered, but it was only after a great amount of perserverance. I have seen one case where the blood would not flow even though there had been made application of cold water. I think to be of benefit in these cases, the application of water should be continued for several hours after the patient has begun to improve.

Dr. L. S. McMurtry: I would like to ask, for information, if it is not true that in sun-stroke the blood will not coagulate at all, as it would do under other conditions. I have seen this statement somewhere.

Selected Formulæ.

THE TREATMENT OF LEUCORRHŒA.

The following solutions are recommended in the treatment of leucorrhœa by Gallois, according to the *Jour. de Médecin de Paris*:

℞ Sulphate of copper,.....gr. xv.
Water.....ʒ viii. M.
Sig.—Make a solution, and use as an injection in chronic leucorrhœa.

Prescribe at the same time ferruginous preparations, internally, and baths.

Another formula which is useful is:

℞ Salicylic acid.....gr. xc.
Glycerin.....ʒiv.
Water.....Oii. M.
Sig.—Dissolve the salicylic acid in the glycerin by the aid of heat, and add water.

This amount is used in six injections, one being given each day in vaginitis, due to irritation or inflammation about the uterus and vulva.

Still another formula is one containing:

℞ Chlorate of potassium.....ʒiv.
Wine of opium.....ʒiiss.
Tar-water.....Oi. M.
Sig.—Make a solution, and in a half a pint of hot water place two or three large tablespoonfuls of this solution, and, after mixing thoroughly, employ as an injection in fetid leucorrhœa.

As an astringent injection the following may be employed:

℞ Powdered catechu.
Powdered myrrh.....āā gr. lxxv.
Lime-water.....ʒxiii. M.
Sig.—Filter after prolonged maceration.

Give this injection several times a day, as long as the necessity continues, or the following may be employed:

℞ Chlorate of potassium.....ʒi to ʒiii.
Wine of opium.....ʒiiss.
Tar-water.....ʒviii. M.
Sig.—Make a solution, and add two or three dessertspoonfuls to a quart of hot water, employing as an injection night and morning, particularly in cases of leucorrhœa associated with endometritis, polyps, or fibroids. The duration of the injection should be about five to six minutes.

In cases of leucorrhœa or vulvitis, occuring in young girls in which there is no true vaginitis or metritis, the local treatment and the inflammation about the vulva is to be combated. This treatment is both local and general. The parts are to be washed carefully with astringent decoctions or with a weak solution of Goulard's extract. After this has been

done, the washing may be carried out by weak solutions of bichloride of mercury and by baths and lotions.

In other cases, carbolic acid, in the strength of 5 parts to 1000 of water, may be employed; and, finally, in obstinate cases, a solution of nitrate of silver, in the strength of 3 grains to the ounce, may be resorted to. In the intervals between the bathings, the parts are to be separated by lint impregnated with a weak solution of carbolic acid, or covered with red precipitate ointment. The internal medication consists in the use of cod-liver oil with quinine, or, in scrofulous children, the use of arsenical preparations. In place of these lotions, leucorrhœa may be treated by powders, such as the following:

℞ Powdered starch.....ʒii.
Subnitrate of bismuth.....ʒiiss.
Sig.—Mix very thoroughly, and dust the vagina with this powder.

In cases where good results do not follow the use of starch, powdered acetate of lead or tannin may be used, provided care is taken that they are pure. Frequently this treatment is useful after the the injections above named have been employed. With this treatment the following prescription in given internally:

℞ Powdered sulphate of iron.....ʒii.
Subcarbonate of iron.....ʒiii.
Powdered red cinchona bark.....ʒi.
Pulverized cinnamon.....ʒi.
Ergotine.....ʒi.

A small pinch of this powder may be given with the principal meals, and is particularly useful at the approach of the menstrual epochs. Prolonged injections, morning and night, of cold water, to which has been added a little vinegar, may also be advisable

In cases of gonorrhœal vaginitis the discharge may be stopped by the following:

℞ Tannic acid.....ʒvii.
Water.....ʒiv. M.
Sig.—Make a solution, and by the aid of the speculum introduce two tampons saturated with this solution.

If needed, a third tampon may be inserted. After twenty-four hours these tampons may be removed and cleansing injections employed, after which other tampons may be employed. Rest in bed is to be strenuously advised.

In other cases a solution made up as follows will be equally advantageous:

℞ Carbolic acid.....gr. xv.
Alcohol or cologne.....ʒi.
Water.....ʒiiss.
Sig.—Mix, and by the aid of the speculum once or twice a day insert tampons wet in this solution and practice astringent injections.

Sometimes it will be found necessary to use other tampons in place of those wet with alcohol and carbolic acid, particularly if a detergent influence is required, such as follows:

℞ Tannic acid.....gr. ss.
Pure glycerin.....ʒiii.

It is worthy of notice that in vaginal injections in cases of leucorrhœa it is necessary to employ large quantities of liquid.—*Ther. Gazette.*

REMOVAL OF A CALCULUS FROM THE VERMIFORM APPENDIX; RECOVERY.

Pinnock reports (*Australian Med. Jour.*, vol. xiv. No. 1) the case of a man, aged nineteen years, who was suffering from the usual symptoms of perityphlitis. Belladonna was applied externally and administered internally, and under this treatment the patient improved for some days, but became worse again, having obstinate constipation and vomiting matter with a fæcal odor. An exploratory operation was decided upon. This was done seventeen days after the beginning of the illness. The incision was made in the linea-alba large enough to admit the hand. Numerous adhesions were encountered, and a small cupful of pus and a quantity of fæces were evacuated. The vermiform appendix was found bound down by adhesions. It was found to contain a calculus, which was removed. A glass drainage-tube was inserted, and the wound closed with deep silver-wire and superficial horse-hair sutures. At the end of fifty hours a rubber tube was substituted for the glass one.

The calculus weighed fourteen grains, measuring half an inch in diameter and six-sixteenths of an inch in thickness. It was formed of phosphate of lime, and was arranged in concentric layers.

Reference is made to two similar cases, recorded by other observers.

Of 125 cases of ulceration of the appendix examined by Fenwick, a concretion, mass of fæces, or other foreign body was found in but fifty-five. In forty-seven of these, twenty-eight were concretions, fourteen hardened fæces, and five seeds or shell. In 200 dissections, Ferguson, of Toronto, found foreign bodies in the appendix fifteen times.—*Amer. Jour. Med. Sci.*

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Leading Articles.

ANNOUNCEMENT.

Owing to the increasing pressure of other work, Dr. Reichert finds it necessary to discontinue his editorial connection with the REPORTER. He desires to express his hearty thanks to the readers of the REPORTER for the many manifestations of their appreciation of his efforts to improve the journal and for their invaluable co-operation.

THE THERAPY OF DIPHTHERIA.

In a comparatively recent number of the REPORTER, in an article on the subject of blood-letting in pneumonia, that praiseworthy and veteran investigator, Dr. Hiram Corson, made use of the following remark, "Experience is a harmful thing as a reason for continuing to practice a certain course, unless it has been successful experience." We certainly agree with Dr. Corson.

The average practitioner, especially if he cannot or will not take the time for new and original researches, is very prone to fall into a certain rut, out of which it is almost impossible to remove him. Nearly every physician of this class has his favorite cough mixture, his favorite prescription for diarrhœa, etc., and as years roll on and newer and more efficient drugs appear upon the market, we find him still plodding along in the old path which is "good enough" for him, and meeting many failures as well as occasional successes with stoical resignation. His "experiences" lay in one direction, and he would not deign to adopt another course.

Not very long ago, a physician is said to have asked a colleague for a good remedy for catarrh—it was cheerfuly given. "But how do you know it is good," was asked, "have you had any experience with it?" "Why certainly," was the prompt reply, "I have had catarrh

for the last ten years myself, and have used nothing else."

This sort of "experience," is, however, not confined to the busy practitioner who lives a decade or so back, as far as his practice of medicine is concerned, but many able and thinking men fall into similar ruts, and stay there until they are literally hurled out by the flood of new and improved ideas that are forced upon them.

We need not go far for examples—one of the most eminent surgeons of the day, a man whose profound knowledge and exhaustive writings are recognized the world over, was years before finally embracing, even in a measure, the principles of antisepsis. His "experience" was in another direction, and hence the difficulty.

We must thank Löffler for having demonstrated the biological, morphological and pathogenic properties of a bacillus which has been proven to be the exciting cause of a number of diphtheritic diseases. In other cases this bacillus is not found, but bacteriological examination reveals the presence of the streptococcus as the exciting factor.

The severity and course of this disease is largely dependant upon the exciting microbe. The clinical picture, however, which meets our view when either of these germs are present is so similar in the first stages of their growth, that the differential diagnosis can only be definitely determined by a careful bacteriological examination.

If we class under the name "diphtheria" only that condition so dreaded where the choking of the child is imminent, then only Löffler's bacillus can be regarded as the ætiological factor. The symptomatic picture is such that we cannot but agree with Löffler in speaking of this form of the disease as the "true diphtheria" in opposition to the variety caused by the streptococcus. The latter Löffler speaks of us as "pseudo-diphtheria."

Both affections differ materially in their reaction towards various therapeutic measures. It has been the pseudo- or streptococcus diphtheria that has afforded us so many purported cures for diphtheria.

In the beginning of the diseases, as has been said, it is frequently difficult, and often impossible to clinically differentiate the two forms, only a bacteriological culture will do this. An apparently harmless process, confined entirely to the tonsils, and primarily only accompanied by a slight elevation of temperature, and with but little alteration in the patient's general condition, may develop within twenty-four to forty-eight hours into a severe case of true diphtheria; while, on the contrary, a process which at the outset is apparently most acute, may prove itself to be caused by the streptococcus and be easily cured by therapeutic measures.

Arguing from the fact that where guinea-pigs are inoculated with the bacillus of diphtheria, in spite of the severe pathological changes of the kidneys and pleural cavities, no bacilli are found in the internal organs, Löffler has concluded that these bacilli must produce a poison which is most deleterious to the organism. He has been able to isolate this poison, and his discovery has since been confirmed by Roux and Jersin as well as Kolisko and Paltauf. Later Brieger and C. Fränkel have shown that this poisonous substance belongs to the albuminoids. This substance prominent for its poisonous properties, undoubtedly plays a most important part in diphtheria.

While the bacilli of diphtheria seldom enter the circulation, yet through their growth in the fauces and thereabouts they open a way of entrance to the blood-vessels for other microörganisms, especially streptococci, by means of the necrosis of the epithelium which they produce, and these in turn increase in the organism, and tend to greatly complicate the disease.

The successful therapy of diphtheria

must answer three distinct requirements. First, it must directly influence the life of the bacilli and check their growth. In doing this it also prevents a further formation of the poison they produce. Second, it must check the action of the poison already absorbed into the system. Third, it must prevent the invasion of other micro-organisms, or if already present, destroy them. According to Professor Strübing, of Leipwald, in an article on this subject in the *Duetsche Medicinische Wochenschrift*, these ideal requirements can be realized by the use of a combined local and general treatment of the disease.

We, however, know of no remedy which will with certainty annul the action of the diphtheritic poison in the system. We are equally uncertain of being able to destroy other micro-organisms which have been absorbed. We must, therefore, strive to check the development of the diphtheritic bacillus, and to prevent the invasion of other germs. In a patient, however, who has for some time been under the influence of the diphtheritic poison, it cannot be expected to gain as much by any local treatment as when the disease is taken at its first appearance. In favorable cases we can succeed by local treatment in closing the doors against these enemies of the human organism, but the success of such a treatment depends upon the earliness with which the treatment is instituted. The vast importance, therefore, of the early diagnosis of diphtheria cannot be over-estimated.

Apart from this, in the more advanced cases, the substances generally used in the local treatment must, to occasion any benefit, be used in such quantities as endanger poisoning. It has been said by some that all local treatment is worthless, since the diphtheritic membrane continues to form anew. This new formation is, however, caused by an internal process of the disease.

The diphtheritic disease of the mucous membrane first causes necrosis of the epithelium, and then an alteration of the vessels of the mucous membrane, the latter then discharge a fluid exudate, which forms the false membrane. This formation of pseudo-membrane continues after the death of the bacilli, and as long as any of the previously formed poison remains in the mucous membranes. Not until the change of the vessels of the mucous membrane has disappeared and the epithelium again becomes normal does the formation of false membrane cease.

If these membranes are removed mechanically, one must be careful not to leave the wound thus caused in a condition which might facilitate the ingress of other micro-organisms; that is to say, one must keep the mucous membrane of the throat constantly under the influence of substances which will antagonize such germs. The removal of the false-membrane is, however, not an absolutely necessary measure, since the bacilli are usually in the upper layer of the membrane, and substances locally applied easily penetrate it. The chances for recovery are better the thinner, that is the younger, the membrane.

Upon these principles Strübing has instituted a treatment which he has applied to a whole series of cases. For the local treatment he has used alternately applications of iodo-phenol and liquor of sesquichloride of iron and sulphur. Apart from this, the mouth was kept clear by constant gargling. For the gargle diluted lime-water was used. When the subject was too young to use a gargle, inhalations were used in its place.

For the internal treatment the following was used:

℞ Hydragyr. cyanat..... 0.01 gram.
Aquæ dest.....100.00 grams.
Sig.—One teaspoonful every hour.

On the strength of Löffler's experiments the following mixture was applied to diphtheritic patches every 4, 6 or 8 hours:

℞ Acid carbolic..... 3–5 grams.
Ol. terebinth..... .40 "
Alcohol absol..... .....60 "

Aside from this the following mixture was used as a gargle in suitable cases:

℞ Acid carbolic..... 3 grams.
Alcohol.....30 "
Aquæ distil.....70 "

The danger of poisoning should be guarded against by a careful watching of the urine. As soon as the liquor sesquichloride of iron causes an intense reaction of the urine, the carbolic acid should be stopped

In other cases local mercurial treatment was also instituted. Solutions of 1: 1000 of the bichloride being applied locally, and a 1: 10,000 solution of the bichloride or cyanide used as a gargle.

The mercurial treatment seemed to have certain decided advantages over all others in true diphtheria, although the carbolic treatment was most efficient. A series of bacteriological experiments by Löffler. have shown that the latter treatment acts well upon the diphtheritic progress.

As has been mentioned, recent cases offer greater chances for recovery than those of longer standing. Even when it becomes possible to check the local process, the secondary changes in the organism frequently cause death, especially in cardiac affections.

The results obtainable are equally as unfavorable if the air passages become affected. In favorable cases timely tracheotomy may sometimes prevent stenosis of the larynx, and some times inhalations of lime water, papoid, lactic acid, etc., may cause a loosening of the false membrane.

Those cases which we clinically diagnose as diphtheria, and yet belong to the class of pseudo-diphtherias, distinguish themselves by their lighter course and greater susceptibility to treatment. When treated as true diphtheria, Strübing has found that this form is most satisfactory to treat.

Scarlet diphtheria, or diptheritic scarlet fever, Löffler has found to be due to the action of streptococci. Here the carbolic acid treatment proved to be the most efficient. If the process extends over the entire fauces and nares, and the streptococci have been absorbed into the blood in large quantities, then the patients become "septic," and it is only a happy chance if they recover. If in such cases the local processes have been checked, our attention should be turned to the heart's action, but even the most active treatment is frequently unavailing.

The prophylactic treatment, consisting of gargling or applications of carbolic acid solutions, is recommendable in all cases of scarlet fever.

In conclusion we would say that Strübing's treatment is based upon sound principles, and, more than this, has been proven to be of great value.

THE THERAPEUTIC VALUE OF SUPPURATION.

Vochier having observed improvement in cases of puerperal septicæmia, taking place coincidently with the appearance of a focus of suppuration in some part of the body, suggested that in certain cases the establishment of suppuration by the subcutaneous injection of turpentine might be of therapeutic value. Later a case of pneumonia was reported by Lepine, in which this method appeared to have been of great benefit. A case has recently been reported by Gingeot. A man twenty-nine years of ags, of alcoholic history, suffering from acute pneumonia, received on the ninth day subcutaneous injections of turpentine into the four limbs. At the time his condition was very critical. The injections were very painful and were followed by extensive œdematous patches, and later by suppuration. Within two hours of the first injection the temperature fell two degrees, and this was followed by subsequent improvement. The patient ultimately recovered. A similar case is reported by Raoul in which a patient, apparently moribund on the sixth day, was apparently cured by similar treatment. The explanation of the improvement given by Gingeot is that the production of artificial abscesses, by setting up leucocytosis, brings up reinforcements of phagocytes, as it were, to the assistance of the original defenders.—*Bost. Med. Surg. Jour.*

Book Reviews.

A NEW PRONOUNCING DICTIONARY OF MEDICINE. Being a Voluminous and Exhaustive Hand-Book of Medical and Scientific Terminology, with Phonetic Pronounciation, Accentuation, Etymology, etc. By John M. Keating, M. D., LL. D., Fellow of the College of Physicians, of Philadelphia, etc., and Henry Hamilton, author of a Translation of Virgil's Æneid into English Rhyme, etc., with the collaboration of J. Chalmers DaCosta, M. D., and Frederick A. Packard, M. D. With an Appendix. Philadelphia: W. B. Saunders, 1892. Price, Cloth $5 net; Sheep, $6 net.

This work of nearly a thousand pages octavo gives besides the dictionary proper a considerable amount of matter in the form of an appendix which will prove of every-day usefulness to the physician and student. Like most of its class it does not call for an extended review. Regarding the number of words, it seems sufficiently full—many new words have been added and those obsolete omitted. The definitions are usually crisp and satisfactory, but occasionally we notice a bad slip, as for instance "Catamenia. Applied to the monthly discharge of blood from the ovaries." The question of pronounciation received careful study, the matter seeming to depend entirely as to whether or not Greco-Latin medical terminology should be accepted and incorporated *en masse* as a part of the English language, and they wisely decided to follow the custom of the majority of English-speaking physicians and largely adopt an anglicized pronounciation without hard and fast rules. In connection with accentuation, they have closely followed the rules laid down in Worcester's unabridged.

In the appendix, which occupies nearly hundred pages, we find tables of weights and measures and metric weights and measures;of the equivalents in Centigrade and Fahrenheit scales; table for calculating the period of utero-gestation; diamaters of the female pelvis and fœtal head; table of cardiac murmurs; diagrams of distribution of the cervical, brachial, lumbar and sacral plexuses; table of the cranial nerves; table of the localization of the functions of the segments of the spinal cord; table of the chief characteristics of the principal bacteria; table of leucomaines and ptomaines; table of the number of props of different liquids required to comdose a fluid drachm; dose table; list of incompatibles; table of poisons with an account of the general symptoms, modes of death, antidotes and general treatment; list of the newer drugs and their solubilities, doses, etc., diagrams of the motor nerve-points, synonyms of diseases, symptoms, signs, etc., designated by proper names, formulæ of standard solutions; drugs and materials used in antiseptic surgery, together with general directions concerning preparations for antiseptic operations.

The book has been printed with new, clear and handsome type on excellent paper. It is alike creditable to authors and publisher and is deserving of the highest recommendation.

ELEMENTS OF MATERIA MEDICA AND THERAPEUTICS, INCLUDING THE WHOLE OF THE REMEDIES OF THE BRITISH PHARMACOPŒIA OF 1885 AND ITS APPENDIX OF 1890. By C E. Armand Semple, B. A., M. B. Cantab, M. R. C. P., Lond. With 400 illustrations. London and New York: Longmans, Green & Co.

In writing this book the author has confined himself to the drugs which are officinal in the British Pharmacopœia of 1885 and the Appendix of 1890. The work is divided into two sections, the first dealing with inorganic substances, including alcohol, etherial preparations, etc., and the second with vegetable and animal products. But little attention has been given to pharmaceutical detail, the reader being refered to the author's "Aids to Pharmacy." Illustrations are quite numerous and are generally satisfactory; some are quaint and others entirely superfluous. The text is necessarily concise, and as a whole is good.

As a book for the American student it cannot prove of much value, owing to the fact of its not being adapted to our Pharmacopœia.

CARBOLIC ACID POISONING IN A HOSPITAL.

A patient in a London hospital recently died from poisoning under peculiar circumstances. A sister-in-law who had come to visit her gave her to drink from a basin standing on a table near the bed. The basin was thought by the visitor to be filled with water, but actually contained a carbolic acid solution.

Correspondence.

REPLY FROM DR. PHELPS TO DR. SAYRE'S LETTER IN THE ISSUE OF AUGUST 27TH.

To the editor of THE MEDICAL AND SURGICAL REPORTER:—My attention has been called, by Dr. L. A. Sayre, to an article which appeared in your paper on July 9th '92. The article in question is, presumably, a stenographic report of a clinical lecture delivered by me to the class at the N. Y. Post Graduate School and Hospital, some time during the past spring. I also received, by this mail, a copy of the REPORTER of August the 27th, '92, in which I find an article, written by Dr. Sayre, headed "Dr. Phelps Misquotes Dr. Sayre." I enclose to you the following correspondence, which will explain itself:

285 FIFTH AVENUE,
Aug, 11th '92,

My dear Dr. Phelps:—

Reginald has just received a large number of slips on Orthopædic Surgery from Sajou (5) for review. And among them a slip from the Philadelphia REPORTER, of July 9th, '92, containing a lecture by you in which you refer to the Morehead Case of Anchylosis from confinement, and say that all the other joints were anchylosed but strange to say the hip-joint that was diseased was *not anchylosed.* And yet you pretend [to] quote from my Book to prove your statement. How you could possibly make this positive misstatement which is directly the reverse of what is published in my Book, I cannot understand, and wish very much that you would explain it.

Yours truly,
LEWIS A. SAYRE.

REPRODUCTION, FROM MEMORY, OF MY LETTER TO DR. SAYRE.

HOTEL CHAMPLAIN.
Lake Champlain.

Dear Dr. Sayre:

Your letter, of August the 11th, is received, having been forwarded me here. In answer I will say that I was not aware that any lecture of mine had been published in any Philadelphia paper. Any error that may have appeared, however, I will gladly correct. I will call at your office as soon as I return.

Very sincerely,
A. M. PHELPS.

Dr. Sayre accuses me, in both his letter and article, of having wilfully misquoted him from his book. This I have never intentionally done. And any error that may have arisen, either through myself or the stenographer, I assured him in my letter I would be more than willing to correct. Dr. Sayre did not give me the opportunity of even examining the lecture of July the 9th, to which he referred, but immediately addressed an article to the REPORTER accusing me of malicious mis-representation. It would only have been ethical, not to say fair, for Dr. Sayre to have afforded me an opportunity to examine the lecture mentioned, and then write a personal letter to your paper correcting any error that may have crept in. If I hurriedly rushed into the journals with a sensational letter whenever my articles have been misquoted, and my work appropriated by others, without due credit, I would have but little else to occupy me. If an error has presented itself in the lecture attributed to me I am certainly very sorry.

I am, very sincerely,
A. M. PHELPS.

CORRECTIONS OF DR. DAWBARN'S LECTURE IN THE ISSUE OF AUGUST 6TH.

To the Editor of THE MEDICAL AND SURGICAL REPORTER:—I am just in receipt of the copies of your August number, kindly sent, as I have been away from town until now, and have read the report of my clinical lecture published therein. I have frequently admired the grace and appreciated the courtesy with which medical reporters have edited, emended and improved upon my disjointed clinical utterances made generally during operations before a class. The sentences glide smoothly and acquire a polish originally denied them.

This article is no exception to the rule, and I beg you to convey to the gentleman in question in this instance my thanks and my compliments. It is inevitable that under such circumstances—the speaker not having the opportunity to correct proof—occasional errors as to what he

said, or perhaps meant to say but through a possible form of aphasia failed clearly to express—should creep in. I will therefore appreciate the kindness if you will publish the following few corrections:

A propos of intussusception: "The patient was inverted, and nearly two quarts of glycerine introduced into the rectum with a fountain syringe, and the patient kept in that position for half an hour. At the end of that time there was a remarkably copious discharge of fæces, and the obstruction was completely relieved." Here, obviously, the statement should be added, that the patient while in the Trendelenberg posture was under anæsthesia.

"In both volvulus and intussception, the best treatment in my judgment is to cut out the affected portion and make an artificial anus, and a few weeks later operate for the restoration of the continuity of the gut, preferably by intestinal anastomosis."

No surgeon (medicine having failed) would think of taking this severe and dangerous step if on opening the abdomen the obstruction could be reduced without great violence, and if the parts be found not gangrenous. Otherwise, nothing but the excision and subsequent restoration of continuity remain, preferably by (lateral) anastomosis.

—"But on applying a match to one of the perforations in the intestine, there was a violent explosion"—etc. In this discussion of Senn's method with hydrogen gas, the statement should of course be that the match was held near the wound in the abdominal wall; not the gut. By-the-bye, if a cup be placed over the wound to catch the gas, and this, still inverted, be removed to some distance and then lighted, danger of explosion is thereby removed. Better still is my suggestion of using oxygen gas instead of hydrogen, for every reason. It is much more readily obtainable and can be used direct from the canister; it it is a systemic stimulant; is easily absorbed into the blood and recovered; and is non-explosive. A lighted match held in it burns with electric brilliancy, however—which is the test. For reasons roughly outlined in the lecture as printed by you, nevertheless the gas-test is not to be regarded as of much value, and it is even an element of danger in some cases. "—It is only very lately that we have learned that the appendix is not an intraperitoneal viscus." Instead, here read "learned that the *cæcum is* an entirely intraperitoneal viscus."

Again—"This point (that of greatest tenderness in appendicitis) is supposed to be about opposite the *apex* of the appendix, and hence it is mid-point of the incision."

For *apex* read *base* of the appendix—a difference, it is obvious, of four to six inches.

In discussing the technique of the operation for appendicitis I have described a plan of my own (heretofore published) for overcoming by *postural* treatment during the operation, the frequent annoyance caused by the slippery small intestines falling over and in front of the cæcum and appendix. In your report I am made to say—"Turn the patient over so that he rests with the left side against the bed or table, and the field of operation is uppermost; then seize *the edge of the gut* in the abdominal opening with a retractor, and draw it forward away from the spine. This will make a cavity into which the small intestines will fall out of the way, while the cæcum which has a very short mesentery cannot follow, but must remain uppermost."

For the edge of the *gut* read the edge of *cut*: that is, the cut abdominal wall. Also, precede the word *intestines*, by *small*.

"The mucous membrane and the stump of the appendix should be scraped with a spoon, and the stump disinfected," etc. Here read for *spoon*, a smallest sized *Volkmann's sharp spoon*.

This number of corrections, and most of them important ones, might I fear cause a casual reader to think the report of my lecture as a whole a very inaccurate one; which would be far from the truth. The report made quite a long article, containing a considerable number of statements, and almost all were correctly reported—much more so than the average.

Very respectfully yours,

Robert H. M. Dawbarn, M. D.
105 West 74th Street, New York.

VESICATION IN INCONTINENCE OF URINE.

Swan (*British Medical Journal*) advises vesication of the nape of the neck as a successful treatment in incontinence of the urine.

Periscope.

THERAPEUTICS.

FEL BOVIS IN TYPHOID FEVER.

Dr. Adolph Zeh, in a lengthy article appearing in *Merck's Bulletin*, gives the treatment in detail of ten cases of typhoid fever in which fel bovis in 3 grain doses, three times a day, was the main reliance, and all the patients recovered. He states that among some personal friends there were forty-eight more cases treated in the same method and not a single fatality. To those interested we commend the reading of the entire paper, which is far too lengthy to reproduce.

TREATMENT OF PNEUMONIA.

From an extensive study of the mortality of pneumonia under different modes of treatment, Reed (*Therapeutic Gazette*, Nos. 3 and 4, 1892) concludes that water, locally applied, either as the wet-pack or as the bath after the method of Brand, is the most efficient single therapeutic measure for acute pneumonia. In the first stage of the disease, veratrum viride or aconite can accomplish more than any other drug; and in the second stage the same is true of digitalis. A combination of one of these cardiac sedatives with opium and diaphoretics constitutes a safe and successful internal treatment in the first stage, being capable of aborting the disease if the administration is begun near the onset and is repeated at short intervals, day and night. Venesection, though a most efficient procedure in the treatment of pneumonia of sthenic type and, judiciously employed, considerably more successful than expectant measures, is no longer an indispensable resource in managing the disease, as other remedies have been found to accomplish the same results more surely and more pleasantly.—*News.*

A THERAPEUTIC NOTE ON ALOPECIA AREATA.

Dr. L. Duncan Bulkley claims that 95 per cent. carbolic acid applied in small areas of denuded hair surface will facilitate the new growth of hair quicker than any other medicine. He applies it by a small cotton swab on areas no larger than two square inches at one time, and rubs the acid well into the tissues. The treatments are given no oftener than once in two weeks on the same patch.—*Journal Cutaneous and Genito-Urinary Diseases*, February, 1892.

MEDICINE.

THE RELATIONS OF THE BRONCHI TO THE POSTERIOR WALL OF THE THORAX.

Bianchi and Cocchi examined twenty-one bodies, with the following results: They find that the trachea divides opposite the body of the fifth dorsal vertebra, and that its lower end is somewhat to the right of the middle line. They state that the right primary bronchus, which descends more obliquely than the left one, corresponds to the fifth intercostal space. The left primary one runs parallel to the sixth rib. The area occupied by the great and medium bronchial tubes extends vertically from the fourth intercostal space or the third rib, to the eighth space, and laterally to four or five centimetres from the line of the spinous processes.

THE RELATION OF VARICOCELE TO NEURASTHENIA.

Wiederhold (*Deutsche med. Wochenschrift*, 1891, No. 37.) believes that in many cases of hysteria with supposed ovarian symptoms the trouble is really due to dilatation of the veins forming the spermatic plexus, and that if any operation is performed ligation of these veins is preferable to castration, providing that the ovary is not much diseased.

FÆCAL VOMITING AND NEUROSES.

Dr. Desnos reports (*La Tribune Med.*, Dec. 3) the case of a youth found unconscious on the highway. He had escaped from a criminal insane hospital. He had epileptiform attacks, but exhibited hysterical stigmata. During several attacks fæcal vomiting occurred. He stated that for two years he had never passed fæces otherwise. The vomitings were fæcal in character and contained no traces of food. They had preserved the mould of intestine. The patient was seen during the attacks. At the time of vomiting he complained of enteralgia and the abdomen became tympanitic. These vomitings had obtained after traumatism producing cicat-

rization of the anal region. Dr. Labbé had seen an hysteric whose enemata were passed by the mouth. Dr. Legendre said that the duration in the first case was exceptional. He had seen similar cases in hysterics. The pathogeny was antiperistaltic movement from the large intestine to the mouth. Dr. Matthieu called attention to the fact Cherchewski (*Revue de Med.*, 1885) had, several years ago, called attention to neurosis attended by tympanitic distension of the abdomen and fæcal vomiting.

SURGERY.

EPITHELIOMA.

At the Vienna Gesellschaft, Eiselburg showed a case of a man, æt. 58, who thirty-five years ago had a pustule on the parasternal line that was rubbed off, forming a sore. Twenty years ago it was about the size of two kreuzers, at the present time twice the area of the palm of the hand. The site is unusual. He related two others that had come under his notice, one on the deltoid, another on the upper part of the arm, after a burn he had had when seven years of age.

ABSCESSES IN POTT'S DISEASE.

Dr. Burrell believes the following conclusions are warranted: 1. That efficient mechanical support of the spine is the prime factor in the treatment of caries of the spine associated with an abscess. 2. That under an expectant plan of treatment the abscess will, in many cases, disappear. 3. That the indication for operative interference is a steady or rapid decline in the patient's general condition. 4. That the operation should consist in thorough evacuation of the abscess, and the establishment of drainage from as near the seat of the disease as is practicable.—*Archives of Pediatrics*, May, 1892.

ON THE TORSION OF ARTERIES.

In connection with operations for excision of tumors, and other excisions of a like character, Jonathan Hutchison remarks as follows: "I may mention that for many years I have quite ceased to use any other means for arrest of arterial bleeding than torsion. In excision of the breast, for instance, I do not think that I have during the last fifteen years ever used a ligature. The torsion is always effected by a pair of Well's clamp forceps, now in such universal employment. I am always extremely careful to close all the vessels, keeping the wound exposed for a considerable time for that purpose. Very seldom, indeed, have I encountered any secondary hæmorrhage."—*Archives of Surgery.*

OBSTETRICS.

INFLUENCE OF MACERATED FŒTUS ON CHILDBED.

Swiecicki (*Nouv. Arch. d'Obstét. et de Gynéc.*, March 25th, 1892, Supplement, p. 137) finds that in 247 cases of macerated fœtus, childbed was perfectly normal in 157 cases, even when fœtid gases and stinking liquor amnii were expelled from the uterus. In seventeen cases inflamed breasts occurred, without suppuration; in seven *post-partum* hæmorrhage with rise of temperature; and in seven temporary œdema of the vulva. In fifty-two cases there was rise of temperature during the puerperium without appreciable cause; it appears that syphilitic women are subject to such rises in childbed. This must be due, Swiecicki thinks, to external infection; the macerated fœtus cannot infect until air has entered the uterus. In six cases slight parametritis occurred. Only one of the 247 died, and in this instance pleuro-pneumonia and nephritis existed before labor. Labor usually takes place about the seventh month, but neither the maceration of the fœtus nor its extraction at delivery appears to have any distinctly bad influence on childbed.—*Brit. Med. Jour.*

PROTECTION OF THE PERINEUM.

Dr. William S. Gardner (*Journal of Gynæcology and Obstetrics*) writes that the value of a complete perineum is so great that the gynœcologist spends much time in inventing new methods for its repair. What he has to offer on this subject is only the method of applying the principle that time is the great perineal protector, bearing in mind that almost any perineum will distend sufficiently to allow the safe passage of the head, if only the head can be prevented from advancing with too great rapidity

just during the last portion of the second stage of labor. The two great forces driving the child toward the outer world are the contractions of the uterus and the contractions of the abdominal muscles. There comes a time in the labor when the perineum becomes so weakened by distention that it can no longer bear the great pressure of these combined forces, a time when a few minutes' delay means the prevention of a rupture. Uterine action is beyond our control; the contraction of the abdominal muscles can be controlled either by complete anæsthesia or by the will of the patient. She is instructed in the interval between the pains that when she feels a pain coming on she is at once to open her mouth and breathe through it as rapidly as possible. In addition the the head is held back by pressing against the perineum in the direction of the pubes. The perineum should be as carefully guarded during the passage of the shoulders as during the delivery of the head.

GYNECOLOGY.

LIPOMA AND FIBROMA OF THE FALLOPIAN TUBE.

Parona (*Ann. di Obtet. e Gin.*, 1892, No. 2) in removing the adnexa for the cure of uterine fibro-myoma, encountered a lipoma the size of a pear, from which was pendent a normal ovary. The tube was so imbedded in the tumor that only the fimbriated end was visible. It apparently developed from one of the fimbriæ.

Spaeth (*Zeitschrift für Geb. u Gyn.*, Bd. xxii., Heft 2) reports the case of a patient from whom he removed a tube which contained a true interstitial fibromyoma imbedded in its wall at a short distance from the uterine end. There were no evidences of chronic inflammation in the tube, so that it could not have been a case of so-called pachysalpingitis.

SALICINE FOR PELVIC PAIN.

Cheron (*Med. News*) states that in pelvic pain during the course of metritis or salpingo-ovaritis as well as in pelvic cellulitis and peritonitis particularly if these troubles are associated with rheumatism, that salicine is of value. In those women who after the menopause, have uterine pain and discomfort in the lumbar or sacral region, with occasional flushes of heat and neuralgic dartings, a careful interrogation as to any history of rheumatism should be sought for, and if this disease is found to be present, salicine is administered. The dose which he ordinarily recommends is fifteen grains, to be divided into three parts. Very soon after the administered the pain decreases. Cheron generally directs that one drachm of salicine be divided into twelve capsules. One of these capsules may be given morning, noon and night, the patient taking a glass of water at the same time to prevent irritation of the stomach.—*Arch. of Gyn.*

NEWS AND MISCELLANY.

THE DOCTOR AS A DEBTOR.

There is a good deal said in medical journals about the doctor's bills and the hard time he has to collect them. It seems that there are doctors who are debtors, and who are not very responsive to just monetary claims upon them. We are rather glad that the Cleveland boy, as narrated below, got the best of his debtor. The boy in question had as a customer a certain South Side doctor. When the physician's bill reached $1 the boy presented it. It was hard to collect. The boy called several times, but the doctor never had the dollar. The physician moved away and the lad lost sight of him for a time, but finally located him on the West Side and renewed his attacks. At last one day he told his mother he would make one more effort, and then if that were not successful he would give up. Accordingly he went to the doctor's office and found the doctor out. But inside the door hung the customary slate. On it the boy wrote. "Call at——Street, William Smith." The doctor called and the boy saw him coming up the street. He told his mother what he had done, and said: "Now, I will hide, and you show him the bill." "I will do nothing of the kind, Willie Smith," said the lady, "and you ought to be ashamed of yourself." A young lady visitor in the family thought more of the scheme and, confronting the doctor at the door, presented the bill. The professional man said that the joke was on him, paid the dollar, and went away laughing.—*Medical Record.*

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THE
MEDICAL AND SURGICAL REPORTER.

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Original Articles.

SPECIALISM.

JOSEPH PRICE, M. D.,
PHILADELPHIA.

Literary and Academic societies are of early history. Societies for the promotion of knowledge or enlightenment in the line of specialties are a product of the nineteenth century. They are an outgrowth of a recognized necessity among students and scholars for the organization of society institutions for discussion, collection of facts and comparison of results. As we have advanced in knowledge, and the field of our labor has broadened in pace with it, these societies have increased in number and become more specialized. From the State organization of specialists we have the International Congress as a natural outgrowth. The chief advantage of societies of specialists is that they focus, systematize, investigations. The most modern and triumphant specialism is that of abdominal surgery. It has made recent signal advances. In only rare instances did the old surgeon venture to enter the abdominal cavity, while the surgeon of to-day enters with marvelous skill and success. Experience and careful experimental research by specialists have simplified methods and are rapidly doing away with timid manipulation. In this line the command of exactness has something of military certainty and emphasis in its sound. All the major cases in abdominal surgery come properly within the sphere of the specialist by their very nature. To deal with them successfully requires aptitude, special training, the power of rapid manipulation, precise and dextrous use of instruments. There may be some danger in so exaggerating our specialties as to make us lose a wise balance as physicians. The essential conditions of good work are a sound, enlightened judgment, accuracy of physiological knowledge, careful study of the causation of diseased conditions and of the best methods of applying our scientific knowledge to practical use. The respective fields of the specialist and general practitioner are not so widely separated that their several success is not dependent upon their study of the same conditions.

We do not find it difficult to separate the all-around-doctor from the specialist when we consider the definite field of the one and the broad, limitless field of the other. But we maintain that within the lines of our profession there are no successful specialists who have not had extended experience as general practitioners; whose best equipment, most valuable professional treasure, are the deep-bedded lessons of such experience. The recruits of the ranks of specialism, all those who have reached the high water-mark of success, whose names are written large come from the ranks of the general practitioners. Conditions keep them within the hoop of the same horizon. The one important lesson for both to learn is where the domain of medicine ends and that of surgery begins. In the lines of no one of

our specialties will a superficial training answer. The old practitioner with his vast general experience, his varied knowledge, his mastery of very many branches, his careful study of his work, and its results, his quickness to recognize the deviations from health in special organs, his knowledge of their relationship and influence on other organs preeminently fit him for some specialty if his taste and love for the work directs him that way. It should be carefully marked that taste and love for a special line of work is essential to success. In general practice every doctor has the conviction that there is some one thing in which he is better, more successful, than in another. And it is likely that his constituents, while they recognize his general ability, further recognize that he has a specialty; they speak of "our doctor" as being specially good in certain diseases. And in these diseases his neighborhood brothers of the profession call him in as consultant. These men are representative of the old school specialists. And we congratulate the profession that we still have some of them left. We rejoice that we still live in the midst of these old-fashioned practitioners. For in the terse words of a eulogy on a distinguished surgeon, "More than any men they have helped to make us gentlemen."

The new specialist is a mushroom growth,—he is an embryo product of our modern schools. He elects his specialty before he leaves college. After graduation he announces that he is to make nervous diseases a specialty, or he is going to be an oculist, a gynecologist or an obstetrician or at a bound he is going to be a laparotomist,—he will not bother with the minor details of gynecology but will walk straight into abdominal surgery. Or it may be that in his aspiring he may want to climb into ethereal regions and he selects electricity as his specialty. It is a gratification to know that the specialists from the ranks of the old school practitioners stay on the earth and have their offices on the ground floor. These new specialists aspire to do work without giving due consideration to the special and general qualifications essential to its successful performance. These incipient specialists do mischief, are more hurtful to the general profession than to themselves. They are but small items in the account, yet with all there is no danger of the highway of specialism becoming crowded,—along it only the fittest can survive. There is no element of the saint in disease and often it takes the most trained intellect and hands and a high courage to deal with it. He can only prove himself fit for the specialty he professes by what he knows and by the sequal of what he does. The experienced mechanic does with his eye that for which the apprentice requires a foot-rule; the specialist's work must be something of a worship, he must be ever seeking new revelations, unpublished facts.

Too largely does a purely business or mercenary element enter into the motives of the new specialists. The ambition, not altogether American and very human, to "get rich quick" is the predominant incentive with many. Large fees fill the imagination and distort the vision. It should be remembered that to command large fees is first to become preeminently expert. The specialist and the general practitioner meet on common ground each aiding in educating the other, each contributing the materials of their general or special knowledge to the building up of an accurate and comprehensive medical science. All of us must sometime feel that we have met with a trouble with which we cannot successfully deal and that we must summon the aid of one who has made the trouble a special study.

Our medical and surgical literature—old and new—bear witness to growth through many generations. The earlier

history of surgery is chiefly that of battle fields, the dealing with spear- and arrow-head wounds, and many of its advances were due to new forms of wounds inflicted by new instruments of warfare. Though our modern surgical practice is founded on a scientific basis, many valued lessons in operative procedure come from our late battle fields. It impresses us as somewhat strange that such long intervals of time should separate the more important advances in both medicine and surgery. There was very early a subdivision of practice into many specialties, and the specialist, jealous of any special knowledge he might possess, kept secret the more dexterous special operations.

The change has been a radical and welcome one. Now through our society discussions, our journals filled with communications containing all the marks of finish and elaboration give us about all that is well done in our profession. The best evidence is that it has been scarce a decade since many troubles to which women are subject, and for which now operative procedure offers relief and cure were regarded by eminent men of the profession as mythical. The enlightenment of the general practitioner, the increase in his diagnostic ability and the improved skill and methods of the specialist have rendered our phenomenal advances possible. No longer overborne by empiricism we allow the fixing of no limit to our improvement and discoveries. New views and methods will be continuously evolved to take the place of those which have proven fallacious. A courageous, almost audacious spirit of inquiry is doing the work. No one man or clique of men can come to us with their little discovery or their "my method" and say to us, "It is science—it is truth—it is faultless." We want to make some inquiry for ourselves. They must have the support of a resistless logic before we will grant their claim—they must bear the signet of truth as established by an unbroken line of successful use. There will continue to arise many moot-questions, both in specialism and in general practice,—to the adjustment of these there will be brought to bear the collective experience and the attested results of scientific research. There are some advantages the specialist has over the general practitioner. The general practitioner cannot to the same extent as the specialist control environment and sanitary conditions.

Neither the specialist, the general surgeon nor the general practitioner need attempt to arrogate to themselves all the honors. The honors are of easy distribution—they go to those who do successfully the work which lies within the legitimate limits of their departments. That general practitioner possesses the finest touches of the skilled specialist who early discovers and promptly deals with troubles needing operative interference, who through close study and observation has a clinical knowledge of suppurative forms of pelvic and other diseases. There is the best of literature on all subjects coming within the scope of his field.

The educated, conscientious and zealous workers of the profession will most heartily endorse the statement of Dr. Thomas M. Dolan that, "Those who are engaged in general practice have no reason to complain of the growth of gynæcological specialism which has followed on the line of progress and of evolution, for the general practitioner and specialist have still their *rôles* and are mutually interested in the development of the study of the diseases of women; nay more, I would assert that by linking themselves with such societies as our Gynecological, and by digesting the experiences which the leaders in gynecological practice so readily place at their disposal, general practitioners can thereby better qualify themselves for that position which, if I read rightly the signs of the times, they are likely to hold in the

future. It appears almost a certainty, that the differentiation in the ranks of the profession will be of such a nature that we will have two orders: first, a family physician or medical attendant, who will have the general care of the public; and secondly, that we shall have behind them an order who devote themselves exclusively to the study of a single part or parts of the body. It is a growing opinion that the specialist should for some years be a general practitioner, and that then by predilection for some individual organ or part of the body, he should take up that as his specialty. The field of medicine, and especially gynecological medicine, is so vast that it is only permitted to general practitioners to have sufficient knowledge to treat the ordinary diseases of womankind; and at the same time he should be able to accurately diagnose those conditions for the relief of which he should seek the aid of those who have taken up the speciality. What is wanted by the general practitioner is guidance and instruction in the diagnosis of obscure conditions. He is willing to learn, to keep pace with the times; and it is important that he should familiarize himself with the symptoms of myoma, multi-nodular fibroma, ectopic pregnancy, salpingitis, suppurating forms of tubal disease and the numerous accidents incident to parturition—he should possess a knowledge of the retrograde changes incident to the growth of hard tumors and the retrograde changes and accidents incident to cystoform growths. It must be remembered that in many cases time is of the greatest moment, and an early diagnosis means a difference between life and death. Early operation is or should be, a gynecological maxim."

There should be no antagonism between the specialist and the general practitioner, the one ought to be able to cope with the ordinary run of practice,—because specialists themselves have been so liberal in instructing, through our society meetings, elaborate, scholarly papers, textbooks and free clinics,—opening our eyes, and making their knowledge the common heritage of medicine. But our work must stop and have its limits, we must in cases of doubt, in cases abstruse, in cases recognizing special operative measures, invite the aid of the specialists, aid which is always readily given, and aid which we should all the more readily invoke because they are not our competitors, as they have given us the wider field. The field of general practice, so far as the diseases of women are concerned, leaves to the general practitioner an enormous scope of work almost sufficient to satisfy any ordinary ambition, and if he is sufficiently qualified to faithfully, judiciously and scientifically carry out the treatment of the general ailments of women with minor surgery, he may congratulate himself that in some measure he is contributing to the advance of gynecology—and to the happiness of that sex to which our study is devoted. If in general practice we are consulted about a case, and we cannot diagnose it accurately, it is criminal to carry the patient on for weeks or months without seeking other advice. The grave fact that it is human life we are dealing with should drive away every selfish consideration, every prejudice, personal and impersonal, and urge the use of our best wisdom, all the lessons of our study and experience and the summoning to our aid that of others. From the stand-point from which we have considered our subject we cannot escape the conclusion that specialists should be for some years general practitioners. That though each works in his own sphere they are working to a common end, the building up of the science, the perfecting of the art of relieving suffering and preserving human life. That there exists no grounds for narrow prejudices nor antagonisms, one is the servant of the other,—both of humanity. That our

correction of errors, our advance in the exactness of knowledge, is largely dependent upon the most hearty of co-operative effort; and that the general practitioner should be prompt to call to his aid the specialist in all cases which medicine cannot benefit and for which good surgery is the only remedy.

TREATMENT OF RABIES BY AN INTRAVENOUS MODIFICATION OF PASTEUR'S METHOD.

Under this heading was recorded, in the *British Medical Journal* of April 30th, an account of Professor Murri, of Bologna, which, while being treated with Pasteur's method, developed all the symptoms of paralytic rabies. These all cleared up when intravenous instead of subcutaneous injections were made. Dr. Bordoni-Uffreduzzi takes exception to the interpretation put by the original reporters on the above case, and suggests that the rapid recovery after the intravenous injections might very possibly have occurred without any treatment. To emphasize his remarks he reports a case which came under his own observation in which a patient, bitten by a rabid dog and treated by the Pasteur method, suddenly towards the end of the treatment developed symptoms of advancing paralytic rabies. In this case the patient recovered perfectly though the only treatment adopted was the use of a mild laxative and a good diet. Dr. Bordoni-Uffreduzzi also refers to two "exactly similar cases" recorded by him some time ago, in which like simple measures were effective. These remarks have led to a rather sharp rejoinder by Dr. Novi, one of the writers attacked, in which he claims that the "two exactly similar cases" were by no means proved to be suffering from true rabies at all, as they presented only the subjective symptoms so common in people who may have been bitten by suspected but not rabid dogs. He also points out that the entire records of the Institut Pasteur contain no instance like that just narrated by Dr. Bordoni-Uffreduzzi. Thirdly, he maintains the complete justice of his deductions in favor of the intravenous treatment, also challenging his opponent for not having included the above-mentioned case in his statistics published in June, 1891.—*Brit. Med. Jour.*

Clinical Lectures.

BUFFALO GENERAL HOSPITAL.—SURGICAL CLINIC.

PROF. ROSWELL PARK, A. M., M. D.

TREPHINING FOR EPILEPSY—TRAUMATIC ASCENDING NEURITIS AND POSSIBLE EMBOLISM OF BRACHIAL ARTERY.

The first patient this morning is an Italian boy, aged seven, whose history has not been written. The parents are ignorant and the child says little that can be understood. When quite a little child, he was struck on the forehead by a stone while fighting and suffered a depressed fracture. He now shows a scar on the forehead, there is an irregularity in the contour of the bone with evident depression and the child has well-marked epileptic fits occurring once in three or four weeks. I consider the case very favorable for operation now, whereas, if operation were delayed till the fits come on frequently, the prognosis would not be so good. The lesion is evidently of the frontal lobe of the brain and, as we believe the frontal lobes to be the seat of the reasoning processes and perhaps also of that unknown affair which we call imagination, we would not expect to notice motor phenomena while we would be apt to note loss of memory. We have not had an opportunity to test the memory but, for practical purposes as an indication for operation, it is enough to know that the child has epileptic seizures and has this depressed fracture. In any young person a depressed bone pressing upon the dura-mater, or on the brain itself, is a source of especial danger, not always attended with bad results, but like a weak bridge which one may cross without falling through is always likely to cause a disaster.

On the boy's forehead you will observe a scar which I shall outline so far as possible in making my incision. It is always good practice even when the cosmetic effect is not essential to make a wound which is

as little disfiguring as may be, hence, if the patient has a scar in which the fresh incision can be made, it is better to follow it. There is, in such cases as this, another reason why it is better to make the incision in the line of the previously existing cranial scar, for epilepsy may be due merely to the irritation of the cicatrix.

Forty-eight hours previously to entering the clinic room, the boy's head has been shaved and covered with a sublimate dressing. This is now removed and the forehead shaved in order to remove the down and particles of epithelium and other debris, for the razor is a dermal curette as well as an instrument for removing hair. The field of operation is scrubbed with soap and water and then with a potassium permanganate solution, followed by a solution of oxalic acid to remove the discoloration. The periosteum is exposed by curved incision through the overlying tissues and opened by a crucial incision. The deeper portions of the wound I find quite dark, probably stained by particles of dirt or coal-dust incorporated in the flesh at the time of the original injury. I have already told you in the didactic lectures that in young children, there is but one table of the skull unless the frontal sinus happens to be unusually well developed, when the bone in the supraorbital regions is divided into two portions. In this case there is more than the ordinary amount of venous oozing from the trephine wound. There is only one safe rule to follow in the use of the trephine and that is to set aside all generalizations as to the thickness of the skull in persons of different ages and to proceed as if you knew the bone were very thin. To my surprise, I find quite a well marked division of the bone into tables. I will pass around the button of bone which I have removed so that you may see the irregularity of its inner surface. As I do not wish to leave any sharp points of bone to excite fresh irritation, I trim off the margins of the trephine-opening with forceps and then with the bone chisel. The inner margin of the opening is over the longitudinal sinus. I am searching with the probe for abnormal adhesions between the dura and the bone and I must not mistake the natural connection between the dura and skull at this point for an inflammatory process. There seems to be no indication for further interference within the skull. As it is quite likely that some of the foreign material and the cicatrical tissue in the old scalp wound have been irritating, I dissect it all out. The periosteum is closed with fine cat-gut and the external wound with buried cat-gut sutures which have the advantage of leaving no cross marks to show in the scar.

A week ago a lad eighteen years old fell down four stories in a dummy elevator. One shoulder was badly bruised and there was soreness in the pectoral region. He suffered a concussion of the brain but was able to move his arm in almost all directions. We found that sensation was preserved all along the arm, that there was freedom of motion at the shoulder, that the hand could be placed on the other shoulder with the elbow touching the chest, and, in short, by the customary methods of examination, we ascertained that there was no fracture nor dislocation. The boy, however, had been badly bruised and shaken up and was quite ill and, more recently, other symptoms have developed which make his case really serious. The left arm is now almost completely paralyzed. This was not the case on the first or second days after the injury but has been of more recent development. I scratch the skin of the fore-arm quite vigorously with a pin, the patient gives no sign of sensation but sensation begins as I get up toward the shoulder. This test must be made not only along one aspect of the limb but on all sides for as we have three principal nerve-trunks supplying the hand and fore-arm, namely, the median,

the ulnar, and the radial which is a continuation of the musculo-spiral nerve. The wide-spread insensibility which you have seen demonstrated indicates that all branches of the plexus going down to this part are involved, whatever may be the explanation of this injury. There is absolute paralysis of the fingers, hand and wrist. The patient can move his shoulder slightly and he can turn over although he could not do so yesterday.

What is the condition here? There is no question but that at the time of the fall, the patient sustained a severe contusion of the shoulder and especially of the deltoid muscle which acted as a sort of cushion. There was a fear that he might have had a fracture of one or two ribs on this side but I have not been able to get any crepitus nor other sign of such an injury. When he takes a long breath, he has no more pain than would follow from a contusion of the soft parts. Sensation and motor power were excellent for the first forty-eight hours and were then gradually lost. This means, of course, trouble with the nerves. Is the lesion in the brain, in the spinal cord, in the roots of the nerves or in the brachial plexus? We can exclude brain injury for in all probability its worst manifestations would have been the earliest, there is no hemiplegia nor papillary disturbances nor any symptoms of interference with speech, any of the special senses or thought. Hæmorrhage into the spinal cord may cause the development of a gradual paralysis but in this case the paralysis is not extensive enough to be explained in that way. We can scarcely imagine an amount of compression which should affect the arm with so marked paralysis and not involve parts supplied by nerves coming off from the cord lower down, at least on the same side. By the localization of the paralysis in the arm, we are brought to the diagnosis of trouble in the nerves after they have left the spinal cord, the case is one, therefore, of peripheral lesion. I have already shown you, this term, cases of injury to the deltoid muscle with involvement of the circumflex nerve and subsequent inflammation or degeneration, producing paralysis, and have told you that this paralysis may be permanent. Sometimes, also a similar paralysis is caused by the pressure of the head of the humerus on the nerves during dislocation. But there was no dislocation when the patient entered the hospital and if he had a dislocation at the moment of injury it was immediately reduced without being recognized. We must account for the trouble on the theory of a peripheral neuritis of an ascending form. The circumflex nerve was probably the first one to become involved and the inflammation has probably spread to the other branches of the brachial plexus.

There is another important feature of of the case. As I press my finger over the point where his left radial pulse should be felt, I get a very slight pulsation. Now it is possible by pressing the finger against any hard surface to feel a pulse-beat in the finger itself. The determination as to whether I feel my own or the patient's pulse-beat must be made by feeling his other radial artery and noting whether the beat is synchronous or not. I find to-day, what I did not find yesterday, that the pulsation in the left radial in his own. Yesterday I could not detect any radial pulse in his left wrist. Inflammation of the brachial plexus alone could hardly account for this circulatory phenomenon, there must be some interference in the course of the artery. It is impossible to imagine an injury such as this patient has undergone without a certain amount of damage done to the blood-vessels in the axilla. For example, there may have been a thrombus in the axillary vein pressing on the artery or there may have been an injury to the arterial wall or an embolism of the artery. If there is an embolus occluding the vessel, it could scarcely have come

from the heart for the patient had previously been healthy. But there may have been some injury to the artery in the beginning, a thrombosis, and in the course of forty-eight hours a little particle may have become dislodged and carried down into the radial artery so as to shut off its pulsation. If this were to occur in a person where sensations were normal, he would become conscious of a sharp pain in the arm but on account of the anæsthesia in this case, there may have been an embolism of the radial ariery without the patient noticing any change. Again, there may have been a hæmatoma pressing upon both the vessels and the nerves but within the week which has elapsed since the injury, we would expect a perceptible swelling in the axilla and a discoloration of the skin to appear, neither of which signs are present here. The pulse might be shut off by pressure inside the thorax but auscultation and percussion reveal no interference such as effusion into the pleural cavity or consolidation of lung and there is no reason to believe that there is such an internal lesion. The interference with the function of the brachial plexus must of course, be due to trouble outside the thorax, that affecting the blood-vessels might be either inside or outside. The case is somewhat obscure but I believe we have to deal with an ascending neuritis and a partial occlusion of the axillary, brachial or radial artery either by pressure in the axilla or by an embolus lodged farther down.

I am applying blisters over the course of the brachial plexus with the idea of producing counter-irritation for the somewhat hypothetical condition of neuritis. After a time, if recovery does not occur, we must use both galvanic and faradic electricity, the former to maintain the nutrition of the nerves, the latter to keep the muscles in a proper condition and to prevent their atrophy from lack of use. Although the case is a surgical one, I see no indication for operating at present.

Society Reports.

ALLEGHENY COUNTY MEDICAL SOCIETY.

Scientific Meeting, August 16, 1892.

J. M. Batten, M. D., President *pro tem*, in the Chair:

Dr. J. J. Buchanan reported a case of bone grafting as follows:

I wish to show a case to-night which illustrates the subject of bone grafting in two of its aspects. This boy 11 years old, came to this country a year ago last December. Previous to that time he had been perfectly healthy. Before he came on ship board he is said to have struck his foot or the lower part of his leg and received a very trifling injury. After arriving on the ship he was taken with a high fever and great pain in the leg from the ankle to the knee. Expectant treatment was adopted, and when he arrived in Pittsburgh I was called to see him and found the limb swollen and filled with bloody pus. I made an incision the first evening and liberated an immense discharge of bloody matter, and found the bone affected. I had him removed to Mercy Hospital, where I etherized him and made a long incision down over the inner surface of the tibia and found the bone had been the subject evidently of acute osteomyelitis. The entire lower three-fourths of the shaft of the bone was destroyed. I extended my incision from a little below the junction of the upper with the second fourth of the bone down to the ankle joint and removed the lower three fourths of the shaft. The loss of bone was complete. I do not think there was a particle of periosteum left. The shaft of the bone was preserved, and I think it is intended to be an heirloom of the family, but I neglected to have it brought here this evening. The limb was so useless, having lost threefourths of the tibia and the corresponding part of the ankle joint, that that I proposed amputation to the family but they rejected it, and I was very glad to be able to try to graft some bone to take the place of this that had been lost. I disinfected the cavity as thoroughly as I could and packed it with iodoform gauze.

The constitutional trouble disappeared at once. I put the limb in plaster paris and in a few days removed the packing and found healthy granulations springing up throughout the cavity. I then repacked it, and on the sixth or seventh day secured two puppy dogs, chloroformed them to death and removed the long bones. From the neighborhood of the epiphyses, with rongeur forceps I took out pieces about the size of a grain of wheat and planted about fifty of them, along this gutter, just as a person would sod a ditch placing the periosteum next the granulations. I then put on the dressing, with impervious tissue next the grafts, and did not disturb it for four or five days. When the dressing was removed it was found that nearly all the grafts had taken. They could not be pulled off with forceps without considerable force. The granulations soon covered them up and I applied a lot about a week later, and the boy went on to recovery and has a very useful leg. This was more than a year ago. I should say that before the boy was out of bed, he commenced to have abscesses on different parts of the body. The first one I believe was over the lower end of the fibula on the other leg and the next over the lower end of the ulna. He then got abscesses in the soft parts of his legs and arms. These abscesses continued for about a year but did not confine him to the house. About three weeks ago I was sent for to see him. He had severe pain in the region of the head of his tibia on the same side as the original trouble, and from the considerable amount of fever, the absence of any cause for the symptoms, and also the existence of tenderness over the head of the tibia, I concluded he had a bone abscess. I had him removed to the hospital, where I cut down on the head of the tibia and chiseled open the bone, and found the entire head of the tibia filled with pus.

I scraped this cavity out as thoroughly as possible. I made a liberal opening in the bone, and the entire inside of the head of the tibia was removed. After disinfecting it I packed it with decalcified bone chips by Senn's method, putting in iodoform powder. The result was that there was no discharge from the head of this tibia whatever. The operation was done about eighteen days ago, and by the old method of treating these cases, we would have had suppuration for a considerable period, but this boy since that time has never had a particle of trouble and no discharge, except lately a certain amount from the superficial granulations. At the time, just as the abscess was opened, I had a culture made of the pus and I will show it here; it proved to be *staphyloccocus pyogenes aureus*. It is a question what caused this abscess in the head of the tibia; whether this was of the same nature as the subcutaneous abscesses that he had at various times during the last year, or whether these germs had laid dormant in the head of that bone from the time of the first operation. Now, whether this abscess was due to those organisms which had set up the original trouble or whether it was mere accident that he should get this new trouble in the head of that tibia near the old trouble, I am unable to determine. I rather think that the germs were there during the whole year. This case represents the two methods of bone-grafting, one by the application of living bone direct from an animal and the other by the use of decalcified bone. I expected to have another case to-night, but unfortunately the boy went out of the hospital this morning without my knowledge. In that case also the decalcified bone made a perfect result. The boy was only dressed two or three times during his stay in the hospital and the case was without any trouble whatever. Now with regard to the choice of these two methods of bone grafting, I should say that if we have a cavity in the bone, that we ought to take the decalcified bone to fill it. If we have a gap in the bone from which we must take a new start, then we should take the bone with its periosteum in small fragments, from an animal, preferably from a young one. Now the reason these bones are cut up in very fine pieces will of course suggest itself, that in case any of these failed to unite, it could be removed without any trouble. Fortunately in this case they almost all took hold, although there were seventy-five of them; but I believe if we had put in large pieces, portions of some of them would have failed to unite, and the removal of these portions would probably have destroyed the usefulness of what was left behind. For that reason I would always prefer putting in small pieces. I expected to show another case illustrating the grafting of living bone.

where three and one-half inches of the lower end of the tibia was removed and one and one-half inch of the fibula. I grafted this case with the bones of a young puppy. In it I put fifty to seventy grafts and that case also I considered a case of amputation; but after the man's refusal to be amputated, I agreed to try and repair his bone and the result was very good. When I last saw him, a short time ago in the Hospital, he was able to walk on his limb, but the bone was not entirely firm. For a week or ten days after the injury the head of the astragalus was to be seen in the wound.

Dr. Thomas: Many of these cases of diseased bone are troubled with wonderfully,and even where there is not a great deal of lost bone. I sometimes think we graft without periosteum. I cannot account for it, but we get new bone where we think the periosteum has all been destroyed. About one and one-half years ago, a case of complicated fracture of the ankle-joint came to the South Side Hospital. The lower section of the tibia had been broken off diagonally about two and and-half inches above the joint. The tibia had been broken off and the lower end of the fibula. A short piece of the lower fragment was imbedded in the fibula, and it was impossible to dislodge it from that position without incising all around it, and taking it out with the forceps. In that case I wanted to amputate the limb, but the patient demurred. No pus appeared in the wound. This bone was regenerated, and the man to-day drives a beer-wagon. In that case I thought, and think still, that the bone was regenerated without periosteum. Now in this case, if the entire tibia was removed, as the doctor says, we have a regeneration of bone, we have the outlines of the tibia, and we have in a manner cured, but we have not got a complete cure in this case as yet. It is a question with me if it were not better if that limb had been amputated, than as it is. The probabilities are it will never get well, and the probabilities are amputation will have to be done yet. I do think we sometimes carry our conservative surgery too far. I hope I am mistaken in this case; but my opinion is, it would have been better if that limb had been amputated. The patient would have been saved many hours of being bed-ridden and many hours of pain, and, at present, would have been able to walk a great deal better than he does.

Dr. Duff: From what I have seen, I have not practiced bone-grafting myself, but I have seen and read, and I think there is a very bright future before us in bone-grafting, and yet we want to bear in mind, as Dr. Thomas says, that bone has very great recuperative power. I had a young lady come to my office this morning who is not over 21 years of age. I have only seen her occasionally in the past few years. In the fall of 1876 she took scarlet fever. She suffered a relapse, and one abscess after another formed. I removed eighteen pieces of bone from her humerus and from the spinal processes. I cannot state the exact number, two or three were removed from the femur. This condition ran on for a long time, when it became evident the tibia would have to be removed, and in the presence of Drs. Sterling, O'Connor and my father, I removed the shaft of the tibia, removing all of the bone, which I still have in my possession at my office; all of the shaft of the bone, and, I thought at the time, all of the periosteum. I advised amputation at that time, but we thought we would await results. Within six months after that there was apparently a complete bony formation in the midst of the tibia. It was very much thicker than the tibia originally, but it was solid. She is a twin, and the two sisters resemble each other very much. She walks by the side of her twin sister to-day, and it is with difficulty you can tell which is the lame one. I have asked this lady two or three times to come before the society, but she is very modest, and I cannot prevail upon her. I shall be glad at some future time to show the bone which came from her. This case, with some others not so aggravated, leads me to believe the bone has greater recuperative power than we generaly attribute.

Dr. Buchanan: Of course, if the periosteum of the case I have just shown remained, we need not lay any stress on the grafting of bone; but, as I stated, to the best of my knowledge, nothing of the periosteum was left. Now, of course, this is a matter which I cannot prove, even to myself; but to show that bone-grafts can grow without the aid of the original periosteum, I would refer to a case of Dr. Macewen, of Glasgow. The

shaft of the humerous was almost entirely gone, and it had been gone for more than a year. The arm was a perfect flail, but, by repeated graftings of bone, the humerus was replaced; the pieces were set into the gap made between the muscles by dissection; the only guide was the anatomical one of the positions of the muscles. Here several inches of the humerus was gained by bone-grafting, and in this case it is not necessary or not possible to give the original periosteum any credit for the result. Now, with regard to the comparison of this leg with an artificial one, I had hardly expected this criticism, I must say. I think this leg is a good deal better than any artificial limb I have ever seen.

Dr. E. G. Matson opened the discussion of the subject announced for the evening, entitled:

NEPHRITIS.

(*Abstract of the Paper.*)

The writer pointed out that each uriniferous tubule was a kidney complete in itself. In this fact may be found the explanation of the insidious character of some forms of disease of the organ when the morbid process fastens at first upon a part of the tubules leaving the others to continue the urinary function. The lesions are always found to have their primary seat in the cortex, that is to say, in the part of the kidney which performs the vital functions of excretion. It is a fair presumption, therefore, that the origin of nephritis is connected with the excretion itself. This evidently is true in nephritis from lead or phosphorus poisoning. It is possible that in every case the disease arises from the necessity of separating some substance from the blood for which the organ is unsuited, and which is injurious to its structure. This is easy to believe in cases which are intercurrent or sequelæ in infectious diseases. It is not conceivable that exposure to cold could directly affect the kidney more than other organs. It is probable that its well-known agency in this disease is connected with the production of substances which the kidney must deal with in greater quantities than it can bear. If the substances in the blood, with which the kidneys are concerned, were totally incompatible with health, it would be necessary to place the organ next the heart so that they could depurate all the arterial blood before it is distributed to the tissues. Their position on a branch, not large in comparison with the main current, shows that incomplete depuration of the blood is sufficient. It is not easy to understand the causal connection of hypertrophy of the heart with Bright's disease. Evidently it develops in response to a condition of the blood in which the substances to be removed by the kidneys tend constantly to exceed the proportions compatible with health. The hypertrophy of the heart is compensatory to the destruction of a part of the kidney just as much as in valvular disease. By this means the blood is driven at a higher pressure though the lessening intact part of the kidney, which in this way can act on great a part of the blood as in health. The morbid anatomy was discussed: it was pointed out that both interstitial and parenchymatous changes were found in all cases so that the classification into interstitial and parenchymatous nephritis, though convenient, is not strictly correct. Probably (after excluding waxy disease) the best division is into acute or chronic parenchymatous and interstitial nephritis. The division is justified by difference in morbid anatomy as well as clinical history. They are probably only varieties of one disease, and therefore there may be some cases of uncertain classification. The course, symptoms and diagnosis of these forms were detailed. Interstitial nephritis, the most insidious, presents the greatest difficulty. Albuminuria is but transient, dropsy usually absent, while the eye-ground is inaccessible to the majority of physicians. If there is hypertrophy of the heart without defect in its mechanism, arteriofibrosis so that the radial can be felt like a cord against the bone below the point where it is compressed by the finger; accentuation of the second sound of the heart over the aortic area, with *persistent* low specific gravity of the urine, that is with a *persistent* deficiency in the quantity of solids which it is the duty of the kidneys to excrete, diagnosis of interstitial nephritis is justified.

Since Bright's disease is often insidious the disturbances must be borne in mind which it may cause. Tendency to bronchitis, dyspnœa, neither due to heart disease, emphysema or asthma, repeated attacks of diarrhœa, or vomiting on slight provocation, are among those which should lead the practitioner to entertain the pos-

sibility of Bright's disease. As to uræmia, which is sometimes the first sign of the disease, it should be remembered that it may appear as headache, mental wandering, delusion, or even mania. Albuminuria is always a symptom of great importance. Probably all physicians are aware that albuminuria is not a pathognomonic sign of Bright's disease, but there are not a few who suppose tube-casts to be an inevitable sign. Practically, tube-casts and albuminuria go together; the same causes seem to produce both. From what has been said of interstitial nephritis, it is evident what caution must be observed in pronouncing a subject free from renal trouble after an examination of his urine. On the other hand if a faint cloud of albumen is found, what are we to say? Albuminuria is in the great majority of cases due to Bright's disease. To prove that is that not an outside cause should be found. Doubtless, albuminuria never exists without disorder of the kidneys. This disorder is generally secondary as cyanosis due to heart disease, or biliary intoxication. The disorder is probably functional and unimportant at times. Functional albuminuria is said to be not uncommon at about the age of puberty. The odds are heavy against the health of a grown man free from jaundice who has albuminuria.

Dr. Grube: I was pleased with the doctor's remarks, and, as I have given this subject a good deal of attention, have had a great deal of experience in making analyses. I am glad he has brought out several points and none more so than that both albumen and casts may be found in the urine, with at least no serious trouble in the kidneys. I have found both, and afterwards had the privilege of examining the kidneys. post-mortem, and could find no trouble there. Because we find a few casts, because we find a little albumen, we often come to the conclusion that the patient is suffering from Bright's disease, when that probably is the smallest factor in his trouble. Now on this point I want to tell my own method of searching for casts. I take low power, not more than one-half inch, a which gives a wide field. I put five or ten drops of urine on the slide without using a cover glass, and in that way if there is a single cast in ten drops it is possible to find it, A thing which must not be overlooked is that casts are so transparent that if you have not very low light they become entirely transparent, and you cannot see them at all. As long as the specific gravity is high enough and the amount in twenty-four hours is sufficient to show that the renal function is being performed the patient may live in comfort, if hygiene is attended to, and therefore we have less field for treatment and management, mainly a question of diet. Prof. Dixon is a great admirer of the skim-milk treatment; not that any thing it contains has a good effect, but it gives rest to the kidneys. You want to give a diseased kidney rest, and to do that minimize the diet by giving skim milk.

Dr. Shaw: I agree with the last speaker in referance tofinding casts with a low light. with a very strong light you cannot see them at all. but with almost no light they come in view very readily, when otherwise they might be overlooked.

Dr. Shaw then referred to two cases met in life insurance examinations, in which slight digestive disturbances alone indicated ill health. The urine, however, showed a faint cloud of albumen and contained tube casts. Both these men were considered healthy by their physicians, yet both were dead in the course of a few months.

Dr. Batten: This was a very interesting subject the doctor read upon this evening, and I am sorry he did not go into it a little farther. Now there are a great many cases that come under my observation that require very skillful treatment. I remember the first case that came under my observation several years ago when treatment was not so well understood as it is now, and I remember that I gave a very unfavorable prognosis, and I treated the case with compound jalap-powder and so on, and to my astonishment the patient got well. I had another interesting case of that sort that came under my observation in a man who who had an acute nephritis from sitting on the ground. It was in April. My treatment was hot baths and the compound powder over the bowels. The question of prognosis in these cases of chronic albuminuria I think is very important. For instance, a man may have only one kidney attacked with chronic-nephritis; if we only thought there was one kidney affected we could give a very favorable prognosis. Again, only a part of the kidney may be affected; in such a case the

prognosis would be favorable. In regard to the treatment of nephritis, we have an increased blood supply to the kidneys. We should prevent this increase of blood and endeavor by some means to dilate the vessels so that the blood can escape. Now to do this, it would be necessary to prescribe some drug that would prevent the heart's increased action, and in addition to that give a remedy that would dilate the vessels so that the blood could escape from the kidneys. For the first we have digitalis, and for the second we have extract of belladonna. With these drugs prescribed in a scientific manner and with the proper diet, I think the patient would be very greatly benefited.

Dr. E. G. Matson: The last speaker thought a single kidney may be affected by Bright's disease. I have never seen the description of such a case. It is true that in autopsies one kidney is often found more extensively altered than its fellow.

Dr. Batten: I have a case that I would like to bring before the society. A woman gave birth to her fourth child on Jan. 15th. On the 16th of the next month, after washing all day, she was taken with puerperal peritonitis. The question arises in my mind how did this contagion enter the system one month after the child was born? Dr. Batten also described a case of mammary abscess without abrasion of nipple.

Dr. Duff: As we see the subject to-day, I think that we ought to speak of these troubles under the heading of puerperal infection. If there was peritonitis in this case, which was puerperal, and it was the result of infection, it would come under the head of what is generally known as puerperal fever, unless we could determine that it was in her system for some time before. Prof. Hurst and others say with regard to the abscesses formed in the mamma that they can not occur unless there is an abraded surface on the nipple, but on the other hand it is asserted there can be abscess of the breast where there has been no abrasion or cracking of the nipple, and it is caused by the staphylococcus which has been introduced through the blood. In Dr. Batten's case germs may have been introduced through the blood. I believe I heard Dr. Murdoch several years ago, when the germ theory first came out, say there could not be a drop of pus in the body unless we had one of those little animals introduced there first. If it is not possible to have a drop of pus it is just as impossible to have puerperal peritonitis or infection without introduction from without or through the blood.

Dr. Buchanan: I understood Dr. Batten to say that thirty days of the puerperium had elapsed before trouble commenced. I think this woman had a trouble which was not puerperal. She had passed her puerperal period. If this woman had had any elevation of temperature, any infection of the tube with a production of pus in that tube, and at the end of thirty days had had a leaking or rupture, causing peritonitis, then it might be called puerperal fever, but if she had passed, as I understood, thirty normal days after labor, I think we would have to bring some other cause in to account for this peritonitis.

Report of Two Cases of Stone in the Genito-Urinary Passages, by Dr. Thomas.

The first case was a case of long standing. The patient complained of urinary trouble for three or four years. It was suspected that he had a calculus in his bladder. Yet his bladder had been examined by some very capable gentlemen several times, and they never were able to detect a calculus in his bladder. I examined him myself three or four times, but I could never detect anything in the bladder. In addition to trouble in the bladder he also complained of his right side, and finally the trouble in his right side appeared to annoy him more than anything else. Not being able to discover anything in the bladder I suspected that it existed in the right kidney. At the urgent solicitation of the patient I cut down upon the right kidney about the end of June. and manipulated it thoroughly, but failed to discover any evidence of stone in the kidney. The wound healed finely without any pus in three or four weeks. The patient complained afterwards of trouble in his urinary apparatus. Dr. Martin sounded him with a searcher and discovered a stone in the bladder, and result was what I show you here. (The extracted stone was here shown.) Now the question is whether the manipulation dislodged it from the pelvis of the kidney, or whether the

calculus had not been in the bladder all this time. Dr. Banks, of New York, discovered a calculus in the bladder three or four times, though the patient had been examined by very able men in New York City, who had failed to discover it, and he claims if you cannot discover one the better plan is to put the patient in bed, and very often you can discover a stone where you could not without this preparatory treatment. The peculiarity of this case, as well as the case following it, is that the patient should go around so long without the discovery of so large a stone. This stone weighs nineteen drachms plus.

The second case was sent to the South Side Hospital. He had been suffering for three years with urinary troubles, and in the mean time he had acquired a gonorrhœa. This patient was treated by six or seven physicians in this city. He had had no control of the sphincter for a long time; about every half minute he would eject what urine was in the bladder. I suspected from the statement that he made that I would find a very tight stricture. I first passed in the searcher and found a stone. I think it was removed July 7th. This is an oxalic acid calculus. The patient had been suffering for fifteen years, and it was never discovered untill he came to the city. I had my reason for performing lithotomy instead of litholapaxy; the bladder was inflamed and contracted, and I thought by this operation perfect drainage would be secured, and the bladder get a long rest, and in that way recover. The first patient left the hospital in twenty-one days, while the second one expects to leave to-morrow. Both have made a wonderful recovery. The second patient's temperature went up to 106 on the second day, then it gradually went down, and in four days was about normal, and remained so since. These cases went on for a long time; if they had been discovered earlier the calculi might have been removed without much trouble. This smaller oue weighs six drachms plus. I think the first patient had been examined by Drs. Wood and Martin. I could use the cystoscope and pass it all around his bladder, yet I failed to discover anything in the bladder with that, or by the use of a searcher, and it was strange to me if it was in the bladder that it could not be found.

Abstracts.

DISCUSSION ON CHOLERA.

THE ETIOLOGY OF CHOLERA.*

Dr. Chas. Seth Evans:

The cholera germ has been found in all cases of cholera which have been examined for it, but this germ, which, by the way, is a bacillus, has never been found to occur in any other disease. Now, the act of finding these bacilli in cholera may be a very easy or a very difficult thing to do, indeed. If the patient is still alive we look to the stools, but to find them in the stools is not as easy as some might imagine. Especially is this the case in the latter stages when the patient is getting well. In the second stage it is comparatively easy, but in the first and third stages it is not. To examine for the germ, part of the stool is placed on the cover-glass, especially one of the white particles which float in the stool, but not infrequently even then the germ is not discovered. At other times we find in the rice-water stool a great number of the germs.

The method of Schottelius is rather an aid in the detection of the germ. This method recognizes the rapid development of the cholera germ in bouillon and the way it is wont, in its multiplication, to kill off any saprophytes which may be present. Thus, in a day or a few hours we will have almost a pure culture of the cholera germ. By this methed one is able in every case of cholera to detect the germ. Of course, in this method of Schottelius it is necessary to take out one of these white floating bodies. Then, of course, the germ may be put on the cover-glass and there stained. Now, what are the properties by which this germ may be separated? In the first place, it is a bacillus with square ends, about one and one-half micro-millimetres in length, and one-sixth of the same in diameter. The bacillus is, moreover, not straight. The younger bacilli are sometimes straight, but they become crooked as they grow older. We find them, the younger ones, straight, and others curved, and still others may be in the form of a half circle. It is this curvature of the bacilli which has given to it its name, the the comma. When these bacilli occur in

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pairs, their curvatures are almost invariably in opposite directions, so that we get more or less of an 'S' shape. Now, in those cases where the bacilla come out in a chain and form a spirillum, we find that this is continued, its curvative being not only in one plane, but in all three planes, and we have a cork-screw arrangement; and this was thought for a time to be typical, but by photographing, and the use of the higher powers, we find that it is made up of bacilli; and we find that this cork-screw form develops especially well when the bacillus is growing under unfavorable circumstances, that is, when it is losing substance and becoming exhausted. The comma bacillus possesses the power of independent motion. In a hanging drop preparation they swarm as insects in the air, like gnats.

As to the formation of spores: Although it is a subject as yet not settled, we may say that there is nothing which represents the permanent form. There have been forms created which were supposed to be spores, but the fact is they are not more resistant than the bacilli themselves.

As to the cultures, that is the means by which we recognize them from other bacilli. They are peculiar. If one pours gelatin plates after the usual manner, then after the usual time one sees the culture full of light white spots, each of which represents a colony grown in the gelatin, and, as it grows, it tends toward the surface, and then, after reaching the surface, fluidifies the gelatin.

It is a very marked peculiarity of the colony that it does not tend to fluidify the gelatin in a large flat surface, but sinks down, until the gelatin soon looks more or less honeycombed in spots. We find, under the microscope, the outline of the colony rough, and it seems to affect the whole upper surface of the colony, thus giving it a granular appearance, and at the same time wavy, and this waviness becomes more and more marked as it grows. It looks indeed, as if the colony were sprinkled over with fine glass or diamond powder. The culture in the gelatin tube is very characteristic. The growth first occurs all along the track made by wire, but especially in the upper parts; so occurring there it tends to form a funnel-shaped arrangement, and gives us a deep, comparatively narrow, funnel, and at the same time the gelatin fluidifies so that the upper portion of this funnel is frequently filled with air, and indeed, not infrequently we get a bubble of air in the upper portion. The older cultures of the germ on the gelatin often show the involution forms.

After about eight weeks a cholera germ will die out in its own culture. Thus, a culture on gelatin will keep hardly eight weeks. A culture on agar-agar will, perhaps, keep three-fourths of a year, under favorable circumstances. The germ also grows on potato, and as I have already said to you, in milk, and in sterilized water. Experiments have shown that it is one of the most tender of germs. A temperature of 122° F. stops all growth, as does also a temperature of 59° F. It grows best between 86° F. and 106° F., about the temperature of the body. A temperature of over 122° F. will kill the germ in every instance, while boiling, 212° F., is a very safe method of destroying it; but a temperature entirely freezing the germ and stopping the growth does not kill it. Besides heat and cold, it is absolutely dependent on moisture for its life. Articles which have become so dry that they are dusty, do not contain germs capable of production. Again, it is a germ which is very easily destroyed by germs of decomposition. When put into fluid from an ordinary privy vault it dies out in twenty-four hours, and in fluid taken from the sewers of Berlin, in the course of a few days. It is, moreover, tolerably dependent upon the amount of oxygen and the chemical reaction of the culture medium. Thus, acids speedily destroy it. The cholera-bacillus will grow and multiply in sterilized water, and also what is even more important, in milk, without changing its appearance or taste: but unsterilized milk is not a good culture, probably due to the presence of the other germs contained in milk. It is reported that Koch discovered a great number of these germs in an Indian tank, in which case the cholera-germs had probably won the fight over the germs of decomposition, and then grew and multiplied.

It remains a fact that these cholera-germs are only to be found in the intestinal tract of the body; not in the organs, not in the muscles, not in the blood, but only in the intestinal tract. Now, the question arises as to how the germs get into the body. As Dr. Freemen will tell you they can get into the body by breathing, and I wish

simply to refer to the fact that only dry things will become dusty, and so it is that only dry germs will get into the body by breathing, and drying these germs will kill them. So this would do away with Pettenkofer's theory that we get it through the lungs into the body, and this leaves the most probable way to be, by what we eat and drink. It is a qnestion of how the germ gets from the intestinal tract of one man into that of another. This may be accomplished either directly or indirectly by the food or clothing, or by washing.

Now, just one word as to immunity. I believe it is conceded that one attack secures immunity, but that this immunity would last from one epidemic to another is highly improbable.

THE PATHOLOGY OF CHOLERA.*

Dr. Leonard Freeman: The germs of cholera are confined to the alimentary canal, and, like those of typhoid, almost entirely to the lower portion of the small intestine, because here the peristalsis is less, as is also the acidity of the bowel. The cholera spirillum is exceedingly sensitive to acids of all kinds, and particularly to hydrochloric acid, the normal acid of the stomach.

The pathological changes found after death are not at all so numerous nor great as one would be led to expect from the severity of the disease, and they are practically confined to the alimentary canal, particularly the lower ileum. The bowel shows the effects of inflammation, especially about the solitary follicles and Feyer's patches, the germs having worked their way into the follicles and tubular glands and even between the basement membrane and epithelium, pushing off the latter. The lumen of the bowel is filled with a watery fluid, which resembles gruel or rice-water, and is clouded by growths of micro-organisms, cast-off epithelium, mucus, and *débris* of various kinds. Sometimes the fiuid contains an almost pure culture of cholera germs.

The spirilli themselves are confined to the intestinal tract. The changes in other parts of the body are similar to those occurring in other diseases, except, from its deprivation of its fluid elements, etc., the blood is very thick and dark.

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The proofs that the spirillum discovered by Koch is the cause of cholera are these: (1) It is found in every case of cholera; (2) it is found in no other disease. A third element should come in here—we should be able to inoculate the germ into animals and reproduce cholera; but, as animals do not naturally have cholera, and we do not care to experiment on man, this link in the chain of proof is worthless. But if a certain germ is always present in a disease, and is confined to that disease, the inference is very strong, reasoning from its presence alone and from what we know of the causation of other diseases, that it is the cause of the pathological condition in question. The fact being admitted, as it almost universally is, that the germ is always present in cholera, if it is not the cause, then it is simply an accompaniment of the disease. If this be the case, it must develop in numbers from some normal inhabitant of the intestinal tract, or else be produced by the transformation of some such inhabitant into the cholera-spirillum. But the careful examination of hundreds of normal stools has demonstrated the fact that no such bacillus inhabits the intestines, and we know, from long observation, that one form of micro-organisms never changes into another form. In a word, the proof for the cholera-spirillum rests on the same foundation as that for typhoid.

A great many people, who should know better, seem to think that the germs of cholera, as well as those of other diseases, can always be seen at once with the microscope alone. This is often impossible, and it may take considerable search with the plate-method before they are finally discovered.

I was speaking the other day with a prominent pathologist in one of our larger colleges. He did not believe in Koch's spirillum. He had made a great many autopsies in Calcutta, as well as examined a large number of stools, and not in one instance did he succeed in finding the cholera-spirillum. He claimed that Koch waited too long before making his examination, and thus allowing the spirillum to grow after death. He did not state, however, whether these investigations were made by the plate-method or by the miscroscope alone. Cunningham, in a recent article, says he found ten different kinds of comma-bacilli in six-

teen cases of cholera, and that Koch's bacillus was not the most numerous of the lot. He is also an unbeliever in Koch's theories; but these theories rest on too firm a foundation to be overthrown by isolated evidence, without that evidence rests on a very firm foundation indeed.

The germ is seldom found in the vomited matter, and then only when regurgitated from the intestinal canal. The bacilli cannot live long in the stools, and after four days, it is claimed, there is no danger of infection from a cholera-stool under ordinary circumstances. The reason is that other germs,—those of decomposition, for instance—soon kill out the germs of cholera. Experiments in this line are, however, to some extent artificial. Cholera-spirilli have been discovered in the foulest kind of water, teeming with all sorts of bacteria.

The cholera germ grows well only in milk which does not contain other germs. In fresh milk it grows quite rapidly for the first few hours, according to Kitasato, and then, as the milk sours, the growth ceases. Hence fresh milk is more dangerous than sour milk, and the longer you keep it the less dangerous it becomes. This does not argue, however, that milk should not be sterilized—sterilization of milk by heat is still our means of protection against cholera, as well as other diseases; but the milk must be sterile.

One of the most important disinfectants, and one to which sufficient attention is not paid, is sunlight, not only in cholera but in various other diseases. Many of the experiments which have been made with various pathogenic germs suspended in water will have to be gone over again, because the effects of sunlight have not been considered.

As is well known, cholera germs cannot stand dryness, even for a short time. There is very little danger from such dry things as letters, dry clothing, etc. Kitasato has made some experiments lately, however, which seem to show that under certain conditions the cholera spirilli may be dried without destroying their virulence.

The germs of cholera find entrance to the system through the mouth and stomach. It is possible that under certain conditions they may be breathed in; but as dryness kills them at once, and they cannot rise from a moist surface, it is difficult to see how they can exist in the atmosphere.

These cholera germs are so sensitive to the attacks of other germs that it seems remarkable that they can be the cause of such widespread and tenacious epidemics of disease. It is so sensitive that, theoretically, we need not be afraid of decomposing matter of any kind after a few days have elapsed; but, practically, it is better to clean up all the filth, because in filth is found the cause of the disease at first. The spirillum will live for months, or even years, but this is only in a pure culture. And pure cultures must be rare in nature.

Acids have a very decided effect on the germs of cholera. Even a 0.2 per cent. solution of hydrochloric acid will kill them, which is true of few other microorganisms. As weak a solution of carbolic acid as 0.5 per cent. makes a good disinfectant, killing them in a few moments. Carbolic acid is better than corrosive sublimate, because it acts better in the presence of albumen.

Experiments on man have not been very numerous, as one would naturally suppose. A Frenchman once made some pills from a cholera stool and swallowed them; he did not get cholera. But all individuals who swallow cholera germs do not get the disease. Hence the Frenchman proved nothing but his own foolishness. In the catching of cholera a thousand and one factors come in. Some of them we know, and many we do not know. There is the condition of the stomach, the virulence of the particular culture of germs, the age, general condition, climate, temperature, meteorological factors, etc.

A man in Koch's laboratory is supposed to have contracted cholera from a culture of the germs, there being no other cases of cholera anywhere near Berlin at the time. He had all the typical symptoms, and his stools contained numerous comma bacilli. During the course in which I participated in Koch's laboratory a careless student knocked a culture of cholera germs from a table, breaking the containing flask and spilling the cultures over a number of us who were standing about. We spent the rest of the week disinfecting. Klein swallowed some fluid containing Koch's comma bacilli. No evil effects followed; but, again, this proves absolutely nothing.

One reason why animals do not get

cholera may be that peristalsis is so active that the germs pass through the alimentary canal too quickly. Another reason is the acidity of the stomach. If the peristalsis be corrected by injections of opium into the abdominal cavity, and the acidity of the stomach be neutralized by an alkali, the germs of cholera may be successfully inoculated in animals and a disease produced closely resembling that in man.

There have been a number of theories to account for cholera. The most important, perhaps, is Pettenkofer's. He admitted that the disease was due to a germ, but he claimed that the germ must first undergo an incubation in the ground before it could produce the poison which causes cholera—that the germ (x) + the ground (y) = the cholera poison (z). Pettenkofer is right this far, perhaps, in that it requires more than the germ alone to produce cholera; but the discovery of the spirillum by Koch, and its life-history, sufficiently does away with Pettenkofer's ideas.

Cunningham and others believe that cholera morbus is really Asiatic cholera under unfavorable conditions for its perfect expression, but that at times favorable conditions arise, and then an epidemic results.

Certain ptomaines, or tox-albumens, have been found in connection with cholera germs by Brieger, Pfeifer and others. Whether the symptoms of the disease are produced by these, or merely by the local action of the germ in connection with the removal of the watery elements from the blood, is not definitely decided. But, as the symptoms of many other diseases have been shown to be due to these poisonous products circulating throughout the body, one would naturally think that cholera was probably not an exception to the rule.

PERMANGANATE OF POTASSIUM IN PHOSPHORUS POISONING.

M. Bocar (*Bulletin Generale de Therapeutique*, April 25, 1892) recommends the use of potassium permanganate in phosphorus poisoning, in a 1 per cent. solution. In its presence phosphorus is converted into orthophosphoric acid, which is entirely harmless. Dogs poisoned by phosphorus and treated in this way have recovered. The permanganate of potassium exerts no harmful influence on the stomach.

THE CHEMISTRY OF CHOLERA *

Dr. S. P. Kramer:

With the establishment of the etiological relation of the cholera bacillus, there presented itself the question as to how the germ produces the symptoms of the disease. As the pathologists have told us, there is no pathognomonic lesion, and so we can hardly say that the germ causes death by destruction of tissue. And so the inference was left that it produces a chemical substance, which, when absorbed, produces the toxic symptoms that go to make up the symptomatology of the disease. The investigation on this line began with the possible isolation of an alkaloid or ptomaine. The investigation in this direction, however, did not yield very profitable results. It was in 1890 that Brieger and Frankel obtained from bouillon cultures, by filtration through Pasteur filters, a substance which they called tox-albumen, which, injected into animals, produced symptoms almost typical of cholera. Shortly after the injection the animals became very quiet, refused food, and very soon became somnolent; the breathing became superficial and the temperature fell below normal; this was followed by death in from twelve to twenty-four hours. From this filtrate they obtained a percipitate with alcohol that had the same toxic properties, only in less marked degree. They found that, when the filtrate was heated to a temperature of 60° C. for a half hour, it had lost its toxicity. Kitasato confirmed these results in a similar investigation.

Within the past year Pfeifer has taken up the subject, and his experiments show that the poison is not so much a secretion of the germ as it is a substance which goes to make up the body of the bacillus itself. He obtained the same fatal results by subcutaneous injection of the germ, killed by thymol or other antiseptics. The animals died in from ten to twelve hours, showing the same symptoms as those described by Brieger and Frankel.

This tox-albumen, or bacteria-proteid, does not stand any great amount of heat for any time, and is very susceptible to chemical reagents.

One word in regard to the effect of the

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cholera bacillus upon the guinea-pig. If the bouillon culture is injected into a guinea-pig the animal dies in about twenty-four hours, with the symptoms mentioned before. The cholera disease cannot have developed in that time, but the animal is killed by the toxic chemical compound in the culture. This was a starting-point, and from this was adduced the presence of toxic albumens.

Now, it would, perhaps, be well to add what has been done as to immunity. Brieger, Kitasato and Wassermann devised a method of immunizing guinea-pigs in the following lines: They said that the germ so reacts on the cells that they produce a something antagonistic to the toxines produced by the germ—an antitoxine, for instance. They then said: We will grow this germ on a substance made from an organ rich in cells; and they took for this purpose the thymus gland of the calf, growing the germ in a bouillon made from these glands. After remaining in the incubator for three days the culture was filtered through a Pasteur filter, and then heated for fifteen minutes at a temperature of 65° C. in order to destroy the tox-albumens; the fluid was then used as an immunizing fluid, and injected into animals. The animals so treated with one cubic centimetre for a period of five to seven days were found to be perfectly immune to the disease. These experiments were performed four months, I think, before the publication, and at that time they were still immune. In their latest investigation they obtained the same results with the ordinary bouillon culture (without the thymus). So that it is probable that the cholera bacillus, both within the body and in artificial cultures, produces a toxic substance, which may be destroyed by heating to 65° C. for fifteen minutes, and an immunizing substance, which is more resistant. The two may thus be separated and the latter used in the treatment or prevention of the disease.

It certainly looks as though we have here an outlook for the future. These investigators found that the immunity began to show itself after the second day of treatment; so that if the treatment is not too dangerous in man, we shall be able to immunize persons affected in the earliest stages of the disease and thus prevent the fatal results.

THE DIAGNOSIS AND TREATMENT OF CHOLERA.*

By WILLIAM OSLER, M. D.

The diagnosis of Asiatic cholera, easy and clear during the prevalence of an epidemic, may be at its outset (and under the circumstances) exceedingly difficult. The clinical features of the disease and the bacteriological examination of the stools furnish the data upon which to base an opinion.

In the *clinical picture* we are at once confronted with the lack of symptoms distinctive of, and peculiar to, the disease. A case of cholera nostras (morbus) may present every feature of the imported malady; and though it rarely kills with the same rapidity, yet I have known death to follow in an adult within fourteen hours. The preliminary diarrhœa, the vomiting, the copious serous discharges, the collapse, and cyanosis offer no differential criteria.

It is only, however, during "cholera times" that this difficulty becomes serious; and then during the summer months, if the number of cases increases rapidly, it may tax all the resources of our art to reach a positive conclusion. The recent experience in Paris is, in this respect, most instructive. Throughout the month of May, June, and July, an epidemic of choleraic diarrhœa broke out in certain of the suburbs that received polluted Seine water, and more than four hundred deaths occurred. The disease, which was called cholera nostras, choleriform diarrhœa, and cholerine, in many instances killed within a few hours and had all the clinical characters of the Asiatic form; but the persistence in certain localities, without rapid extension, and the freedom of the city proper, encouraged the hope that it was due to intrinsic and not to extrinsic causes.

Dupuy's interesting report from the Hôpital St. Denis describes a disease of abrupt onset, a rapid course, and of great fatality, thirty-one deaths occurring in sixty-five cases. There seems to have been a disposition on the part of the authorities to conceal the serious nature of the epidemic—partly, no doubt, in consequence of the absence at first of positive bacterio-

**Medical News,* Phila.

logic information, and partly owing to the difficulty in obtaining uniformity in the opinion of the physicians, some declaring it to be true cholera, others that it was only a somewhat widespread endemic of cholera nostras.

Since, then, it must be acknowledged that in individual cases and even in local outbreaks, it may not only be difficult, but even impossible to distinguish clinically the two affections, the physician should, from the outset (particularly at the present juncture, when an outbreak may occur), take precautions as if dealing with true cholera, especially, in carrying out disinfection of the stools.

It is of the greatest importance to see cases early, before the symptoms of collapse appear, and people should be instructed to seek advice on the first indication of gastro-intestinal disorder. Dyspeptic conditions and diarrhœa, often premonitory symptoms, give timely warning in many instances, but by no means in all, for an individual may go to bed feeling quite comfortable and awaken during the night with cramps, vomiting and diarrhœa.

It is scarcely necessary to refer to the attacks simulating cholera produced by arsenic, corrosive sublimate, and certain fungi.

Bacteriologic examination is of the first importance, and should be carried out by experts who have critical familiarity with the complex flora of the intestines. Though there are difficulties, the differentiation of the comma-bacillus of Asiatic-cholera can be made, and has been made in the recent outbreaks in Paris by Netter, Chantemesse, and Roux. In all doubtful cases, measures of isolation and disinfection should first be used, and then a thorough examination carried out to determine the presence or absence of the comma-bacillus.

It seems almost an abuse of terms to speak of the *treatment* of a disease of which the mortality is at least 50 per cent.; but although measures are futile in the more malignant cases, there can be no question that prompt action may arrest progress in the less severe forms, while we have at our command the means of alleviating many of the most distressing symptoms.

The ideal treatment would be found in a remedy that, given early, would either control the multiplication of the bacilli in the bowels or neutralize the action of their poisonous products. Several drugs have been recommended for this purpose—salol, particularly on experimental grounds, by Loewenthal; and reports from various sources speak of good results. The drug may be given freely, in doses of from gr. xv to xxx every hour at first, for four or five hours, and subsequently every three hours. It probably acts by retarding the growth of the organism. There is no known remedy that is directly antidotal to the cholera poison. Brunton has advised atropine, to counteract the supposed contraction of the pulmonary arterioles, regarded by Sir George Johnson as the cause of the cyanosis.

The symptomatic treatment should be directed to—

a. Relieving the collapse by hot stimulants, as tea, coffee, brandy, and the external application of heat in various ways. The hot bath should be tried.

b. Checking the vomiting. Cracked ice and champagne, creasote, hydrocyanic acid, menthol, and other means may be tried.

c. Checking the diarrhœa. There can be no question that the collapse is directly due to diarrhœa, and yet it is probably an effort of Nature to get rid of the poison. Indeed, an evacuant treatment has been urged by Johnson, who advises the use of castor-oil; but the general opinion runs strongly in favor of the use of remedies to check the profuse discharges. Various combinations of opium and ether are employed, with or without astringents. Morphine, hypodermatically, is of the greatest value for this purpose, and is to be preferred to opium by the mouth if the vomiting is obstinate. It has the advantage also of quickly relieving the pains and allaying the terrible restlessness. Lactic acid has been strongly recommended by French physicians.

Two special measures may be given a trial, viz.: *hypodermatoclysis* and *enteroclysis*. The former Cantani urges upon the following grounds:

"1. The death of cholera patients supervenes either by asphyxia in the algid period or in consequence of a tumultuous reaction in the tyhoid stage, because the organism, through diarrhœa and vomiting, has lost a very high quantity of its aqueous constituents, and has retained or cannot longer eliminate the excrementitious materials—the products of combustion and decay—on account of suppression of the functions of the kidneys.

"2. Recovery occurs when absorption is resumed, in the intestinal canal, of the fluids which furnish to the blood and to the tissues the water which is indispensable to them."

The formula which he advises is as follows:

℞
Sodium chloride	80 grams.
Sodium carbonate	6 grams.
Boiling water	2 liters.

With a fountain-syringe and the canula of an aspirator, from one to two liters of the fluid is allowed to flow gently beneath the skin of the flanks. The tumor formed by the fluid is slowly rubbed away. He advises the warm bath in conjunction with the infusion. The operation may be repeated in two or three hours.

Enteroclysis is even more warmly recommended by Cantani, a mixture of laudanum and tannic acid being employed. The following is the precedure: "If a slight attack of a seemingly simple diarrhœa does not yield at once to rest in bed and the administration of a dose or two of warm infusion of chamomile, to which chlorodyne or laudanum has been added in proper quantity, then recourse should be had, without loss of time, to the warm enteroclysis of tannic acid. This enteroclysis is essentially an injection into the colon, per rectum, of a considerable quantity of warm water holding in solution a certain percentage of tannin. The rectal syringe, by means of which the injection is made, is furnished with an elastic tube three meters in length, with a nozzle at the free extremity and a cock at the proximal end. With such an instrument not only the whole length of the colon can be filled with the desired fluid, but also not infrequently a quantity can be made to pass beyond the ileo-cecal valve into the small intestine.

"The tannic solution recommended by Cantani is constituted for an adult as follows:

℞
Boiled water or infusion of chamomile, warm	2 liters.
Tannin	5 to 10 grams.
Laudanum	30 to 50 drops.
Powdered gum arabic	50 grams.

"The temperature of the mixture and the quantity to be injected should vary according to the age of the patient and other circumstances, in the judgment of the physician. The most convenient time for administration of an enteroclysis is immediately following an evacuation." (Shakespeare.)

Society Meetings.

The Mississippi Valley Medical Association will hold its Eighteenth Annual Session at Cincinnati, Wednesday, Thursday and Friday, October 12, 13 and 14, 1892. The program is a valuable one, containing many of the most prominent names in the profession our country affords. It covers every department in medicine. The attendance will be unusually large, as Cincinnati is the centre of population of the United States. Not only the scientific, but also the social part of the meeting will be of the highest order. The interest of the Convention will be augmented by the meeting of the gentlemen interested in the Pan-American Medical Congress, also other bodies of medical men. Dr. Benjamin Ward Richardson has written his earnest desire to be present. The Association will be just in time and just in line for many of the gentlemen en route for the American Public Health Association in the city of Mexico. Among the many prominent gentlemen who are expected to read are the following: Dr. Hunter McGuire, Richmond, Va., President of the American Medical Association, the address on Surgery; Dr. Hobart Amory Hare, professor of Materia Medica, Jefferson Medical College, Philadelphia, the address on Medicine. C. A. L. Reed, M. D., President, Cincinnati. E. S. McKee, M. D., Secretary, Cincinnati.

The Committee on Organization of the Pan-American Medical Congress will issue the preliminary announcement within a few weeks. This announcement will show that the organization has been perfected in almost every colony and country of the Western Hemisphere. The local medical societies in each of the constituent countries are made auxiliary to the Congress, which will be held in Washington, D. C., September 5th, 6th, 7th, 8th, 1893.

Dr. Reed, of Cincinnati, Secretary-General of the Congress and Chairman of the Committee on Organization, announces that after extended correspondence between himself and Dr. Maragliano, of Genoa, General Secretary of the International Congress, the date of the Rome meeting has been finally and definitely set for September 24th, of next year. This gives an interval of sixteen days between the Wash-

ington and the Rome meetings, during which time an easy trip can be made from the former to the latter city. It is possible that a steamer may be chartered direct from New York to Rome.

Selected Formulæ.

DISINFECTANT MIXTURES.

The *Sud-Deutsche Apotheker Zeitung*, gives the following:

1. Crude carbolic acid..... 50 parts.
   Iron sulphate..... 25 parts.
   Slaked lime..... 150 parts.
   Calcium sulphate..... 750 parts.
   English red sufficient to color. Powder and mix.

2. Oil of tar..... 50 parts.
   Chalk..... 70 parts.
   Dried bran..... 80 parts.
   Mix.

3. Calcium sulphate..... 15 parts.
   Quicklime in powder..... 10 parts.
   Magnesia..... 10 parts.
   Crude carbolic acid..... 15 parts.
   Infusorial earth..... 7 parts.
   Mix.

4. Quicklime..... 70 parts.
   Charcoal..... 10 parts.
   Crude carbolic acid..... 6 parts.
   Zinc chloride..... 10 parts.
   Hypochlorated zinc oxide..... 5 parts.
   Infusorial earth..... 5 parts.
   Powder and mix.

5. Slaked lime..... 100 parts.
   Coal tar..... 25 parts.
   Infusorial earth sufficient to make a dry powder.
   Mix.

6. Sulphate of iron..... 68 parts.
   Plaster of paris..... 6 parts.
   Calcium sulphate..... 5 parts.
   Infusorial earth..... 5 parts.
   Powder and mix.

7. Iron sulphate..... 3 parts.
   Slaked lime..... 3 parts.
   Turf mold..... 4 parts.
   Mix.

This is especially recommended for privy vaults.

8. Iron sulphate..... 500 parts.
   Plaster of paris..... 475 parts.
   Crude carbolic acid..... 25 parts.
   Mix.

9. Crude carbolic acid..... 2 parts.
   Slaked lime..... 3 parts.
   Turf mold..... 4 parts.
   Mix.

This is the so-called Dietrich disinfecting powder.

SUMMER DIARRHŒA.

For children one year of age:

℞ Zinci sulphocarbolat..... gr. v.
Bismuth subnitr..... gr. xv.
Pepsin saccharat..... 3ss.
Ft. in chart. No. xv. div.....

M. et Sig.—One powder every hour until stools become inodorous; then every two to four hours.

—*Times and Register.*

TREATMENT OF MERCURIAL STOMATITIS.

The *Theräpeutische Monatshefte* recommends the following mouth-wash for mercurial stomatitis:

℞ Tincture of nut-galls.....
Tincture of myrrh.....
Tincture of rhatany āā.....3i. M.
Sig.—This is to be painted on the gums.

As a tooth wash under these circumstances, the following is stated to be useful:

℞ Precipitated carbonate of lime.....
Calcined magnesia āā.....3iv.
Powdered cinchona bark.....3iv.
Chlorate of potassium.....3i.
Powdered rhatany root.....3ii.
Powdered soap.....3vi.
Essence of peppermint.....mxlv.

SULPHONAL-PHENACETIN IN EPILEPTIC INSOMNIA.

—Dr. J. G. Kiernan, of Chicago, reports several cases of epileptic insomnia benefited by the use of the following:

℞ Phenacetin.....gr. xlviii.
Sulphonal.....gr. xlviii.
M. Ut. ft. cap. No. xii.
S. one at 6, 8 and 10 P. M.

A NEW METHOD OF TREATING TUBERCULOSIS, PARTICULARLY SURGICAL TUBERCULOSIS.

Max Schüller, in a pamphlet published in Wiesbaden, 1891, and reviewed in the *Deutsche Zeitschrift für Chirurgie*, Bd. 33, Heft II and III, strongly advises the use of guiacol in tubercular affections. It is given internally and is administered prepared as follows:

℞ Guiacol 5.
Sp. vini rectificat.
Aq. menthae pip. ana 150.
Olei papav. or. ol. jecor. aselli 50.

It is to be well shaken, and a tea to a tablespoonful given four or five times daily. For the past year, the author has been giving the pure guiacol in two to five drop doses in one hundred to one hundred and fifty grams of sugar water. There is also a new preparation, guiacol-carbonate, which may be used. The drug should be give, continuously, for at least eight weeks, and is well born even for months.

In 90 cases of surgical tuberculosis, 70 were healed, 16 improved and 4 died. Locally, surgical treatment is advised to be used in conjunction with the internal administration of the guiacol; thus, in joint diseases the injection of iodoform is to be practiced, and, in glandular affections, extirpation and curetting. The favorable results of the remedy he ascribes to its action on the cells in the neighborhood of the tubercular focus.—*Univ. Med. Mag.*

THE
Medical and Surgical Reporter

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THE MEDICAL AND SURGICAL REPORTER.

SATURDAY, OCTOBER 1ST, 1892.

CHOLERA.

The attention of the entire country for the past few weeks has been directed to cholera, from which we have thus far been preserved only by the prompt action of President Harrison and by the severe but just methods adopted at quarantine stations. When we think how many ways the dreaded disease can be introduced into the country, it seems wonderful that we have escaped the epidemic; and now that we have the mistakes committed, fresh in our minds we can draw excellent lessons from our experience of the past few weeks, which will enable us to better battle against the introduction of the plague, both at present—for the danger of its introduction is by no means past—and in the future.

Let us remember "In time of peace, prepare for war," whether that war is against invading armies of foreigners or invading armies of microbes! It is absurd that our country should wait until an epidemic lands in New York, before we make arrangements to handle the disease. Gov. Flower did a good deed when he purchased Fire Island to receive the passengers, and President Harrison acted well when Camp Low was established; but these places of refuge should have been established as soon as the disease was reported in Russia, instead of after the Cholera had reached New York harbor. Let other ports take proper warning and establish places of refuge for the reception of passengers from cholera ships!

The least we say about the shameful and cowardly action of the "clam-diggers" plus the Board of Health of Islip, the better. Their action is a disgrace to modern civilization.

Much complaint has been made against Dr. Jenkins during this critical period, but we should be cautious not to accuse him unjustly. He has shown himself to be a man of iron nerve as well as iron constitution; his official position is an unpopular one, and it would be almost impossible for any man to fill the place at such a time without making enemies. If the statements are true, that the quarantined vessels had difficulty in obtaining fresh water and disinfectants, then something was evidently wrong and some one was to blame for it. Considerable stock has been made out of the fact that dead bodies were allowed to remain upon ships for twelve or more hours after death, but this point can be blamed to the officers of the ships as well as to Dr. Jenkins. When a patient died at Camp Low and the tug was late in coming to take the body away, Surg. Gen. Hamilton lost no time in talk, but buried the body in quick-lime. The

officers of the ships had an equally efficient way of disposing of their dead when the tug failed to take the bodies away. The ships had plenty of coal and immense furnaces. The bodies could have been tied up in the mattresses upon which the patients died, and could have been burned on board. This thought may at first seem horrible, but it is not half so horrible as the thought of allowing the bodies to lie on board ship for several hours.

The ships' officers have in some cases been almost guilty of criminal neglect. It is beyond doubt, that mattresses and pillows were thrown overboard and washed up on shore, and that is totally inexcusable since fires were lighted and these articles could have been burned. It is also beyond doubt that the captain of one of the quarantined ships was on shore for a brief time. Rifle-balls would have been the best thing for a man who so far forgot his duty as this man did.

The action of the quarantine officers in fumigating the luggage of the steerage passengers is certainly to be commended, as it is a practice which can be carried out with good results *not only in time of epidemics but at other times as well.* If it is true, as is stated, that when the steerage passengers were bathed, two or more were obliged to bathe in the same water and wipe on the same towel, then this part of the ceremony should have been omitted since it was worse than useless.

In another column we give several selected articles, treating the subject of cholera from different stand-points. These articles put the matter in a plain straightforward way and are devoid of all minute technical details, at the same time they contain the most important facts upon the subject.

The second annual meeting of the American Electro-Therapeutic Association will be held at the New York Academy of Medicine, 17 West Forty-Third Street, October 4th, 5th and 6th, 1892.

Periscope.

THERAPEUTICS.

TREATMENT OF PLEURITIC EFFUSION.

Dr. Thorongood writes (*Brit. Med. Jour.*, May 28): From such experience as I have had with the salicylate of sodium in cases of pleuritic effusion, I believe it to be often of service. It seems to act by reducing temperature and abating fever; and when this result is brought about, especially in cases of recent effusion, absorption proceeds at once. I have often remarked at the bedside that you do not get a pleuritic effusion to absorb while any inflammation or fever is going on.

In Victoria Park Hospital it has not been an uncommon thing for a patient to be admitted with one chest full of fluid, and after several days' rest this effusion has gradually gone away. I remember how my colleague, the late Dr. Sutton, used to enjoy telling me such cases where a pleuritic effusion vanished under treatment with tinct. cardam. co. ℥ ss, aquæ puræ ℥ j, t. d. s.

Mercury, I believe, limits inflammation in serous membranes, and so promotes absorption. When the absorption commences, the further administration of mercury may often be stopped. For years I have employed mercurials in recent pleurisy, and only once did I salivate a patient. In that case we rubbed mercurial ointment over a blistered surface, and, with some soreness of his gums, the patient recovered quickly.

I have given the tincture of the bryonia alba, a medicine that appears to be a good deal used for rheumatism, being known to all our chief chemists, and I certainly can speak favorably of it as checking inflammatory pleurisy and assisting absorption of fluid. The tincture is usually made according to the form given in the *United States Pharmacopœia.* I am told that the public use the sliced root of the bryonia for rubbing rheumatic joints. Like the salicylate, it is quite one of the antirheumatic medicines.

Before tapping a patient, it is a great advantage to be able to get the temperature down, for then the chance of another collection of fluid is not great. Draw off the fluid rapidly, while temperature is

still a febrile one, go on till the patient coughs violently, show the admiring friends a big lot of fluid, and depend upon it very soon you will be again called in to repeat the operation.

GLYCERIN IN THE TREATMENT OF HEPATIC COLIC.

At the meeting of the Acadèmie de Mèdecine, March 8, 1892, Dr. Ferrand read a paper on this subject, of which the following are his conclusions:—

1. Glycerin administered by the stomach is absorbed as such by the lymphatic vessels, notably by those which proceed from the stomach to the hilus of the liver and to the gall-bladder; it is found even in the blood of the subhepatic veins.

2. It is a powerful cholagogue and a valuable remedy in hepatic colic.

3. In large doses (20 to 30 grammes—5 to 7½ drachms) glycerin cuts short the paroxysm at once.

4. In smaller doses (5 to 15 grammes—1¼ to 1¾ drachms) glycerin taken daily, in a little alkaline water prevents the return of the attacks.

5. Glycerin, although it is not a lithontriptic, is, however, the remedy *par excellence* for biliary lithiasis.—*La France Medicale,* March 11, 1892, p. 174.

THE TREATMENT OF PLEURISY.

In a communication to the French Academy of Medicine, West (*Bull. de l' Acad. de Med.*, xxvii, 3, 14, p. 484) states that pleurisy purulent from the outset is much more common in children less than twelve years old than in adults. If in a case of frank pleurisy with effusion absorption has not begun in the course of eight days, puncture ought to be made. In a large number of cases of purulent pleurisy in children, a single puncture suffices, if care be taken to prevent the entrance of air and if the wound be hermetically closed. It is scarcely possible to puncture too early.—*News.*

ATROPINE AND MORPHINE.

Prof. Unverricht (Dorpat), publishes the following regarding the antagonistic properties of atropine and morphine:

Many practitioners have claimed that atropine is an antidote in morphine poisoning. This suppositon has been disproved by experiments on animals, experiments which Herrback endeavors to explain by faulty work and experimentation. He claimed that it is impossible to arrange the experiments in such a manner as to make the antagonistic properties of these drugs self-evident.

Binz lays special stress on the increased excitability of the center of respiration when atropine is exhibited.

Unverricht had occasion to study a case in which the diminished action of the respiratory centers caused by morphine were not improved by atropine.

Patient had emphysema and degeneration of the heart. He had pronounced Cheyne-Stokes respiration after the injection of 1-6 grain morphine. To investigate whether atropine is able to remove the disturbances caused by morphine, 1-60 grain of atropine was injected into the patient. If then it is true, as supposed, that the Cheyne-Stokes respiration is the result of a diminished action of the respiratory centers, and atropine is able to stimulate this center, then it was to be expected that this symptom would disappear after the administration of atropine. But, as a fact, the very reverse occured. The interruptions of breathing became so very long that a repetition of the experiment was considered dangerous.

The conclusion was then reached that, because atropine augmented the symptoms caused by morphine, atrophine produces the same results in respiration as morphine.

Further experiments showed that atropine if exhibited alone will also cause Cheyne-Stokes respiration. Hyoscine and duboisine had the same action.

Unverricht cautions against the use of these drugs as antidotes in morphine poisoning.—*Centralb. f. Klin. Medezin.*

ARSENIC IN LYMPHOSARCOMA.

After referring to the good effects produced by this drug in malignant lymphoma and the glandular enlargement of pseudo-leukæmia, E. Romberg (*Duet. med. Woch.*, May 12th, 1892) reports the following exceptional case. A man, aged 29, suffering from primary lymphosarcoma of the mediastinum, had secondary deposits, especially in the lymphatic glands and in the skin. In the course of the treatment by arsenic, the tumors of the skin actually disappeared in from two to four weeks'

time. There was no such change in the other growths. The nature of the case was subsequently proved by the necropsy conducted by Birch-Hirchfeld. The author can see no other cause for the disappearance of these growths than the arsenic, and he refers to two other published cases in which sarcomotosis of the skin was apparently cured by the same drug. The author says that the case reported here demonstrates how ill-defined is the division between malignant lymphoma and lymphosarcoma, and how indefinite is the term pseudo-leukæmia. The enlargement of the spleen, the hyperplasia of the tonsils, and the good effect of arsenic, show the above case of lymphosarcoma to be closely allied to malignant lymphoma.—*Brit. Med. Jour.*

THE TREATMENT OF PNEUMONIA WITH DIGITALIS.

Hoepfel (*Therapeutische Monatshefte*, April, 1892), reports fifteen cases of pneumonia treated with infusion of digitalis. Forty-five to sixty grains of powdered digitalis is made into an infusion with four ounces of water, the whole being used in the course of twenty-four hours. He concludes, *First:* That toxic symptoms never occur; where vomiting occurs it can be controlled by the use of strong coffee. *Second*: In all the cases the temperature fell, the dyspnœa, pain, etc., disappeared after one to two days' use of the drug. *Third:* All the cures were shortened from one to three days. *Fourth:* The cures usually ended by lysis.

THE USE OF DERMATOL IN EAR AFFECTIONS.

In the *Therapeutische Monatshefte,* No. 12, for 1891, Davidsohn gives the results of his experience with dermatol in purulent affections of the ear. This substance, which is a sub-gallate of bismuth, has been recommended on account of its absorbent and antiseptic properties. He found it useful in otitis externa, and in many cases of chronic otitis media, but in some cases of acute middle ear inflammation it was not only useless, but became a source of danger from the way in which it formed cakes in the discharge. In two cases of cholesteatoma formation he found it of very good use. In its action he appears to have found it similar to boracic acid.

DUBOSINE SULPHATE.

Dr. Lewald, in "*Der Irrenfreund,*" says that as a sedative in mental diseases this drug has no superior. He has used it in a large number of cases, and finds that its hypnotic influence can be depended upon. It is to be administered subcutaneously, in doses of not more than 0.002 gr., and it is in no case to be increased.

The author thought that if the drug were more widely known the time would not be long before it would supercede hyoscine, as it was more effective and possessed less disagreeable properties.

VESICATION OF THE FOURTH AND FIFTH DORSAL VERTEBRÆ IN THE TREATMENT OF NEUROSES.

Alexander Harkin has repeatedly remarked that in men, as well as in women, who are suffering from various neuroses, the spine, in the region of the fourth and fifth dorsal vertebræ, is sensitive to percussion and pressure; and, basing his therapeutic experiment upon this, he has employed counter-irritation of this sensitive spot, in the treatment of various neuroses, and with success. In several cases of hysteria, trigeminal neuralgia, chorea, paralysis of the facial nerve, reflex vomiting, torticollis, dental neuralgia, occipital pain and pruritus pudendi during pregnancy, the writer has employed this treatment with very good results. It consists in the application of a cantharidal blister and ether to the sensitive spot, the region of the fourth and fifth dorsal vertebræ.—*Wiener medizinische Presse,* No. 6, 1892.

TREATMENT OF PURULENT PLEURISY.

De Gassicours (*Revue des Maladies de l'Enfance,* tome x., February, 1892) reports ten cases of purulent pleurisy treated in accordance with the principles laid down by Breton, seven of whom recovered. One of the deaths was due to diphtheria. In nearly all the cases the pus contained pneumococci, usually in pure cultures. This always should be regarded as a favorable prognostic sign. Both the fatal cases were suffering from tuberculosis. In those cases of pleurisy in which the pneumococci are the causative agents, cure from puncture can be hoped for, often a single puncture being sufficient. Usually more will be required. Three successive punctures should be made, practiced at five days

intervals. If after the third puncture—that is, after fifteen days—pus is found still present in large quantity, formal operation for empyema must be undertaken. When streptococci are found together with the pneumococci, the prognosis is far more serious. Even in this case it is possible that punctures alone may cure, but formal operation is usually required.

MEDICINE.

PHTHIRIASIS OF THE EYELIDS.

Following a communication which Dr. Jullien made to the French Dermatological Society upon phthiriasis of the lids, a number of similiar cases have been published in France, which seems to prove that this localization of the pediculus pubis is less exceptional than was at first thought. All these authors are in accord in recommending as the best method of treatment the patient and careful extirpation of all the parasites and their eggs with dressing forceps, by which means, with a little cleverness, a single seance suffices.

THIRTY-FIVE HUNDRED COMPARATIVE OBSERVATIONS ON THE PULSE, RESPIRATION AND TEMPERATURES OF CHILDREN.

Shufeldt (*N. Y. Med. Jour.*, 1892, liv., 258.) furnishes a paper based upon a careful observation of six children; the pulse, respiration and temperature were accurately taken every morning and evening, and these observations were made comparative with the temperature of the ward noted at the corresponding times, and with such other atmospheric changes in their environment as would be likely to influence the states or other physical condition of the children.

A brief summary of the results showed:

1. The variations in the temperature of a child, both during an attack of rubeola and for a long time afterward, as compared with its pulse and respirations.

2. The effect of the temperatures of the ward in cases of rubeola.

3. A normal curve of rubeola unaffected by treatment, and the course of the temperatures, pulses, respirations, and so forth, for a long time afterward.

4. A long curve of normal temperatures compared with the pulse and respirations, and showing the effect of exercise and atmospheric temperatures on the physical conditions.

5. A curve showing rubeola followed by cholera infantum, with comparisons of pulse, respirations and atmospheric temperatures.

SCIATICA AND VARICOSE VEINS.

Quénu (*Med. Mod.*, May 12th, 1892) expresses the opinion that certain cases of sciatica are due to varicose veins. He states that in people with varicose veins and sciatica, varicose veins are found around the nerve and sometimes adherent to it. A patient who had tried various other measures without success obtained relief for two years by wearing an elastic stocking up to the groin. In two other cases in which the pain had been intolerable, Quénu dissected the veins away from the nerve. The pain disappeared, and has been absent for fourteen months in the one case and four or five months in the other more recently operated on. He looks on the operation of stretching the nerve as a brutal procedure giving by no means brilliant results.—*Brit. Med. Jour.*

EMPYEMA.

Rudolph (*Centralbl. f. klin. Med.*, May 7th, 1892) relates the following exceptional case occurring in a young man, aged 18. On January 5th, 1891 he had a rigor, and then went through a typical attack of acute pneumonia affecting the left lower lobe, the crisis taking place on the 13th. He was without fever until the 23rd, when, after a rigor, he had an equally typical pneumonia of the left upper lobe. On the 28th there was a rapid defervescence, but afterward the temperature became intermittent. On February 16th signs of fluid were found at the left base, and pus was withdrawn by the exploring needle. Incision with removal of a piece of the seventh rib was practiced, and a litre of pus evacuated. On March 2nd the temperature again rose. The abnormal signs still present over the left apex had been attributed to delayed resolution. Exploration in the second left interspace revealed pus. The chest was again incised, and a piece of the third rib removed; 2,000 cubic centimetres of

pus were let out. There was no communication between the upper and lower empyema. The subsequent course of the case was tedious. A sequestrum of bone was removed from the lower wound on June 27th, and the patient was discharged well on September 9th. After pointing to the metapneumonic character of this biloculated empyema, the author observes that the adhesions forming the partition must have arisen during the acute pneumonia, as there had been no previous illness. The strength of these adhesions was remarkable. It is the practice at the Magdeburg Hospital, Rudolph says, to resect a rib, and to wash out the pleural cavity in all cases of empyema.—*Brit. Med. Jour.*

ORCHITIS FOLLOWING INFLUENZA.

Briscoe (*Lancet*, No. 3569, p. 192) reported the case of a laborer, thirty-two years old, in which, after an attack thought to have been influenza, orchitis developed, without other complication.—*News*

RAYNAUD'S DISEASE OF SYPHILITIC ORIGIN.

Dr. A. Elsenberg reports the following case: A patient 22 years old, of slight build, and badly nourished, violent diarrhœa. Examination revealed syphilis. On the body there was a syphilitic eruption; on the forefinger of the right hand, as on both legs, there were isolated dark-brown spots, resulting from cutaneous gangrene, from which exuded an offensive, serous liquid. The soft parts of the toes of the right foot partly, and entirely of the left foot, had become mortified. The patient, after having been one month in the hospital, died, and on post-mortem examination gummata in the liver and atheromatous degeneration in the right arteria dorsalis pedis were found. The microscopical examination of the skin taken from the sphacelated parts showed infiltration in the vicinity of the vessels and sudorific glands, thickening of the walls of the vessels, narrowing of their lumen, in some places entire obliteration, in others proliferation of the endothelium, and even development of small gummata between the endothelium and the middle stratum of the vessel. The author, at the end of his article, arrived at the conclusion that Raynaud's disease may arise from various causes, as in the given case from syphilis, and not, as Raynaud thought, exclusively from a reflex spasm of the vessels.—*Gazeta Lekarska*, No. 5. January 30, 1892.

CARCINOMA OF THE BRAIN SECONDARY TO THAT OF THE BREAST.

Patient was a female aged 41; two children; no history of cancer in the family. On June 11th, 1877, right breast was amputated for scirrhus, the tumor being the size of a hen's egg and situated in the upper part of the breast. No glands could be felt in the axilla. Subsequently there were several small glands removed. Since leaving the hospital patient has suffered from headache, which has been very severe, more severe during the night; absent during the day; referred to vertex and frontal regions. No vomiting, but complains of weak eyes. Is dull and forgetful. General paralysis with rigidity of arms; paralysis has been very gradual in its onset. Ptosis of left eyelid. Necropsy showed the brain to be of normal size; no tumor to be seen externally. Situated in the posterior of the occipital lobe of the left cerebral hemisphere was a large deposit of carcinoma; it was of a considerably firmer consistence than the normal brain substance, was somewhat granular on section and of a grayish-white color; was nearly two inches in diameter antero-posteriorly and the same vertically, and reached the posterior surface of the brain, where it was adherent to the dura mater. The upper limit reached a little above the level of the roof of the lateral ventricle. Another carcinomatous deposit, an inch in diameter, was situated in this hemisphere above the anterior to the Sylvian fissure at Broca's convolution. The points of interest are, as it will be seen, that the tumor occupied what is known as the visual centre in the occipital lobe. Unfortunately the eyes were never very satisfactorily examined, although several attempts were made, but slight optic neuritis existed on the right side—opposite to that of the tumor. The other tumor was situated at what is known as "speech centre"—viz., the posterior fronta of the third convolution, and adjacent parts of the ascending frontal and left cerebral hemispheres, which will account for the loss of speech. There was partial recovery of speech a few days before death, probably due to the right cerebral hemi-

sphere taking on that function. It is worth nothing that loss of speech from disease of the left hemisphere is, as a rule quickly recovered from in children by the compensatory use of the right hemisphere. This takes place in some adults, but in others not.—*Lancet*, Oct., 1891.

ILLUMINATION OF THE STOMACH.

Renvers (*Münch. med. Woch.*, April 12th, 1892) recently demonstrated to the Berlin, Medical Society an apparatus which consists of a small Edison's lamp fixed to the end of a bougie and covered by a small glass case filled with water. The electric current is obtained from a battery of twenty cells. If the stomach is full of food illumination is impossible, but if it is quite full of water when the lamp is passed into the stomach an illuminated area is seen which corresponds exactly to the limits of the organ. The apparatus can only be used in the erect posture, when the greater curvature is usually seen a little below the level of the umbilicus. Abnormal dilatation of the stomach can be readily detected, and a case of carcinoma of the organ has been diagnosed by the use of this apparatus, the diagnosis being confirmed by *post mortem* examination. The tumor appeared as a dark spot in the light field.—*Brit. Med. Jour.*

TREATMENT OF TABES-DORSALIS.

Leyden (*Berl. klin. Woch.*, 1892, Nos. 17 and 18) first refers to the drugs most commonly employed. With regard to mercury, he would not oppose its use, but he rejects altogether the syphilitic origin of the disease. Many of the cases which have got well under mercury have been examples of peripheral-neuritis. The treatment by baths sometimes yields good results. Electropathy is, in the author's opinion, a valuable method of treatment, but massage can have but little effect. Leyden does not believe much in suspension, nor in nerve-stretching, nor yet in the orthopædic treatment. He lays considerable stress on what is called the compensatory treatment of this disease, namely, that when the disease is incurable, the disturbance of function should be minimized as much as possible. In tabes-dorsalis the ataxy is one of these disturbances, and this may be in great measure compensated by the use of gymnastic exercises. The very valuable paper by Fraenkel (*Münch. med. Woch.*, 1890, No. 52) on the use of these graduated exercises in disordered co-ordination is referred to. Under the head of complications the pains and gastric crises are chiefly alluded to. The author cautions against the indiscriminate use of morphine. The loss of weight often occurring rapidly if the gastric crises last long, must be counter-balanced by good feeding in the intervals. The avoidance of over-exertion, exposure to the weather, and excesses of all kinds is naturally insisted on.—*Brit. Med. Jour.*

GONORRHŒAL CYSTITIS.

Much controversy has arisen in regard to the real existence of specific gonorrhœal cystitis. Du Mesnil holds (Virchow's *Archiv*) that there is no such thing, and states that when gonococci are present in the urine they have, in all probability, come from urethral pus, and are not products of a true specific inflammation of the vesical mucous membrane itself. In women, he says, pus might easily get into the bladder from the urethra or the vagina, and maintains, on the strength of recent researches, that gonococci have no effect on the composition of the urine, and that cystitis with ammoniacal urine is not produced by these bacteria. On the contrary, it is held that the urine renders the gonococci harmless, or even kills them entirely.—*Merck's Bulletin*, May, 1892, p. 286.

SURGERY.

RESECTION AND SUTURE OF THE URETHRA.

Jouon, of Nantes (*Sem. Méd.*, May 4th, 1892) reports a case of rupture of the urethra followed by urinary abscess and considerable induration of the tissues, which he treated successfully by resection and suture. The resected segment measured ten millimetres at the upper and eighteen millimetres at the lower part. The cut surfaces were brought together with nine fine catgut sutures. The immediate results of the operation were per-

fect, and Jouon thinks that the method should be applied to all undilatable sutures, whatever their origin. Quénu (*Sem. Méd.*, May 11th, 1892) has resected the urethra with indifferent success. The patient was a horseman who had sustained a traumatic rupture of his urethra, and during a period of ten years had undergone internal urethrotomy five times and dilatation on several occasions. The man was in a wretched state, the urine being purulent and ammoniacal, and the bladder the seat of infective lesions. Resection of the strictured portion of the urethra was performed, one centimetre and a-half being excised. A fistula was left, however, and the condition of the urine was but little improved, and Quénu thinks it probable that this was the cause of the failure of the operation. In any future similar case he proposes to prevent the infection of the operation wound by the urine by first making a provisional buttonhole opening in the membranous portion of the urethra. Desprès (*ibid.*) points out that resection of the urethra is not a new operation, having been practiced by Bourguet, of Aix. He thinks suture unnecessary after resection, as healing takes place by granulation when a catheter is tied in. In this way he cured a patient with a strictured and fistulous urethra, two centimetres of which he resected. The fistula left by the operation closed spontaneonsly in a few months.—*Brit. Med. Jour.*

CURETTING OF THE LACHRYMAL SAC

Dr. F. Despagnet urged this before the Congrès Français d'Opthalmologie (*Recueil d'Opthalmologie*, ann. xiii., No. 5), his conclusions being that: Whenever the overflow of tears arises from catarrh of the lachrymal sac (this being the most frequent cause) the alteration of the mucous membrane was the principal factor, and by catheterizing and the injection of astringents the attempt should be made to modify this. If this treatment, practiced through a greater or less period, does not produce the desired result, curetting of the mucous membrane is the operation to be chosen, because it attacks directly and without complication the diseased part and allows the preservation intact of the lachrymal excretory apparatus. If the epiphora coexists with great dilatation of the sac, the curetting should be preceded by the excision of a portion of its anterior wall. Curetting is also indicated in the case of abscess in the sac.—*Amer. Jour. Med. Sci.*

A NEW TREPHINE.

Tauber describes a new form of trephine, by means of which a disc of bone in the shape of a truncated cone can be removed from the skull. The advantage claimed for this shaped button is that on replacing it the level of the skull is preserved, that is, the button does not tend to fall in, also its margin is in close contact with the hole from which it was removed. The author believes that with this instrument, a surgeon may safely remove a series of dics and thus expose a large extent of the surface of the brain. The openings which are not united may be immediately filled up with every confidence of complete closure by speedy osseous reunion.

EXCISION OF AN ŒSOPHAGEAL DIVERTICULUM.

Von Bergmann, of Berlin reports (*Arch. f. klin. Chir.* Bd. 43, Heft 1) the following case, which he believes to be the first in which extirpation of an œsophageal diverticulum has been performed. The patient was a woman aged 38, who for four years had suffered from disordered digestion. She vomited all food almost immediately after taking it, and could feel her neck become thicker as she swallowed. The sound passed sometimes with perfect ease, and at other times was arrested a little way down. As nutrition was seriously affected, and as the prognosis of such cases is bad (13 deaths in 21 cases), Von Bergmann determined to attempt excision of the pouch. A long incision was made along the anterior border of the left sterno-mastoid. The deep cervical fascia was next divided, and a large goître, which seriously hampered the operator, partly separated from its attachments and turned aside. The superior and inferior thyroid arteries, and several veins were tied. The retro-œsophageal space was now exposed, and after a little search the diverticulum was found and freed from the surrounding tissue with the handle of the knife and forceps. It could then be seen hanging from the gullet

like a small pear. It was removed, after which the mucous membrane of the œsophagus was brought together with stitches. The lower part of the operation wound was closed with sutures, the remaining portion being plugged with idoform gauze. Although the patient had a drink immediately after the operation, the œsophageal wound healed by the sixth day. A small fistula which remained closed up after a few applications of the galvanocautery. The wound in the neck then healed up by granulation without further trouble, and the patient was completely cured. As the pouch had a muscular covering on the outer surface, and as the patient had probably suffered from a cervical fistula in infancy, von Bergmann thinks the diverticulum was congenital in origin.—*Brit. Med. Jour.*

AURAL CATHETER STEAM STERILIZER.

Bark, *Journal of Laryngology, Rhinology and Otology*, July, 1892., states that the instrument consists of a metal globe, to which is attached by means of a screw a bent tube with a conical nozzle covered with rubber tubing. A small metal ring is attached to the globe for the purpose of holding it. The globe is then half filled with water, and the bent tube screwed firmly down. The large end of a catheter is then placed upon the nozzle, and the globe held over the flame of a spirit lamp. A powerful steam jet is in this way forced through the catheter, thoroughly cleansing it. The catheter is then immersed in some antiseptic fluid.

FRACTURE OF THE BASE OF THE SKULL.

Dr. Leopold Schiller reports the case of a laborer. While lowering, by means of a rope, an iron column, was struck above the right ear by a swinging column and thrown on his head against a four-by-four beam. Became unconscious. There was a severe scalp wound, bleeding from both ears, nose and mouth, and there was paralysis on both sides of the face and fauces. Bilateral lagophthalmus and a convergent squint of the left eye, the pupil of which was larger than that of the right and sluggish in action. Severe headache, which continued five or six days, but gradually disappeared. Sensation of dizziness which lasted several weeks. Right side of face soon began to regain mobility, and in three weeks patient was able to close right eye and wrinkle forehead on right side. Left side showed no sign of improvement, but later regained considerable mobility. Strabismus disappeared, but still had dizziness and ringing in the ears, also slight parasthesia of the tongue.—*Med. News*, Mar. 5, 1892.

DERMATOL IN SURGICAL PRACTICE.

At a meeting of the Spanish Medico-Chirurgical Academy, Azna (*Revista de Med. y Cir. Pract.*, March 7th, 1882) gave an account of his experience of dermatol in surgical practice. Even when employed in large quantities he said it does no harm; it stimulates granulations, and is particularly useful in skin affections, such as eczema, which are characterized by much discharge and if dermatol is applied to the wounds which have already begun to granulate it greatly stimulates the process, and similarly in the case of soft chancre after the ulcers have been cleansed with antiseptic lotions, dermatol hastens repair, and brings about rapid and thorough healing.

In diseases of the skin Azna things that dermatol, with its drying and astringent properties, its absolute harmlessness, and the ease with which it can be used, may advantageously replace starch powder, oxide ef zinc, etc.

It is also useful in the affections of the female genitals.

THE MECHANISM OF CONCUSSION OF THE BRAIN.

In *Brain*, part i of volume xiii, there is a paper by Dr. Alexander Miles supporting and confirming the conclusion published by Duret, that the group of phenomena commonly spoken of as "concussion of the brain" is the result of a temporary anæmia of that organ. This anæmia is the reflex result of stimulation of the restiform bodies, and perhaps of other important centers in the region of the bulb, produced by the wave of cerebro-spinal fluid which rushes through the aqueduct of Sylvius and the foramen of Magendie from the subarachnoid space of the brain to that of the spinal cord when a severe

blow is dealt over the skull. In accordance with the laws of hydrostatics this cerebro-spinal wave will disturb the equilibrium of the ultimate nerve cells throughout the central nervous system. The hæmorrhages found throughout the brain substance and on its surface are to be ascribed to the recession of the cerebro-spinal fluid, which naturally supports the blood-vessels of the cerebrum. These petechial hæmorrhages are not the proximate cause of the symptoms of concussion, but are rather to be looked upon as an index of the force that produced the injury.—*N. Y. Med. Jour.*

A SIMPLE METHOD OF TREATING MANY CASES OF LACHRYMAL OBSTRUCTION.

Dr. George M. Gould (*New York Medical Journal*, June 4, 1892) gives his method as follows: "First empty the sac and canaliculi by dexterous pressure, and cleanse the eye and palpebral pockets of this unhealthy material, (water, mucoid and purulent.) Then cast the patient's head back and to one side, or have him lie so that a teaspoonful of liquid will be held in the depression formed by the nose, orbital border and superior maxilla. Fill this space with a solution of boric acid, and with the little finger again empty the sac and canaliculi by pressure, and then as slowly lessening the pressure, allow these spaces to refill, by suction and capillary attraction, with the solution under which the puncta are submerged. Again in half a minute empty the canaliculi and sac by pressure, but this time beginning the pressure from the canthus toward the nose and downward, so as to force the antiseptic solution downward into the duct. These emptyings and refillings of the sac may be repeated several times and as often as desirable to meet the indications of the case. It will be usually found that the sac will soon become healthy, and that pressure upon it will not cause regurgitation of morbid material through the puncta."

The solution which Gould uses is composed as follows: "To the ounce of distilled water; of boric acid, ten grains; common salt three grains; chloride of zinc one grain—all deeply tinted with pyoctanin-blue, and doubly filtered after long standing."

Gould adds: "A certain number of cases will not yield to this treatment. There is too great stenosis of spasmodic contraction of the muscular sphincter of the punctum, etc., so that the cleansing solution cannot be forced into the sac and duct. In such cases I am accustomed to insert one sharp point of the iris scissors into the punctum and snip it open one eighth of an inch, perpendicularly downward toward the conjunctival fold. This gives a larger opening for the indrawal of the solution."

Gould states that he is astonished to see how rapidly cases recover under this simple treatment, that formerly would have seemed to demand slitting of the canaliculus and probings."

RUPTURE OF THE BLADDER.

Schlange, in the *Archiv für klinsche Chirurgie*, Bd. 43, H. I., discusses the treatment of rupture of the bladder, and gives the history of a case. He collected 32 cases treated by operation. In 22 of these the rupture was intraperitoneal, of which 10 recovered and 12 died. Of the remaining 10, 7 were cured and 3 died. His own case was as follows: A man aged 34 years, was run over by a wagon, the wheel passing over the abdomen, the bladder being at the time distended. He was brought to the hospital the next day. His breathing was shallow and pulse rapid. The abdomen was distended, and desire to urinate and pain were marked. The catheter only withdrew a few drops of bloody urine. On operating, the prevesical tissue was found infiltrated with bloody urine; the bladder was darkly colored, collapsed, and contained a few blood-clots. On the left side, posteriorly, near the prostate, was a tear five cm. long, and connecting with it, a cavity between the rectum and bladder. Another and somewhat larger tear was found in the apex of the bladder. The abdominal wound was enlarged up to the umbilcus, another cavity containing bloody urine being opened in so doing. Irrigation was not employed, as the extravasated urine was regarded as being only a chemical irritant and not of an infective nature. The posterior opening in the bladder was closed with catgut sutures and the edges of the interior one sewed to the skin. The cavity of the bladder was loosely filled with gauze, one end being brought out of the wound for drainage.

The subperitoneal cavities were tamponed with gauze. In fourteen days the tampons came away and the wound granulated shut—the man remaining permanently cured.—*Uiv. Med. Mag.*

PEDIATRICS.

GLYCERITE OF BORAX IN INFANTILE DIARRHŒA.

G. Mansal Simpson reports in the *Lancet*, April 1892, his experience in the treatment of infantile diarrhœa, by means of glycerite of borax. Glycerine and borax, both possessing antiseptic and soothing properties, soon correct the fermentation of the contents of the alimentary canal, the stools soon losing their offensiveness and becoming normal. The ordinary dose for a child is about 20 minims, administered every two or three hours, according to the severity of the symptoms. The medicine should be diluted with water, and may be flavored to suit.

THE TREATMENT OF INFANTILE DIARRHŒA OF WARM COUNTRIES.

Dr. F. Roux divides the diarrhœas into four classes: 1. Simple catarrhal enteritis, frequently developed by cold, requires only rest, restricted diet, soothing applications to the abdomen, and graduated doses of paragoric. 2. Diarrhœa dependent upon digestive insufficiency, requires a small amount of magnesia in a half-glass of Vichy (St. Yorre) as a purgative, a milk diet, and soups devoid of fat. If the stools are offensive, a powder consisting of equal parts of the salicylates of bismuth and magnesia; naphthol being here contra-indicated because of the irritation which it produces. The return to the ordinary diet must be gradual, and before each meal he directs small doses of nux vomica, rhubarb, anise seed, and calumba, in a claret glass of Vichy or Vals. During the meals hydrochloric acid, and afterward pepsin, diastase, and pancreatin. He counteracts diarrhœa and vomiting by opium, the constipation by rhubarb. 3. The diarrhœa that follows dysentery calls for enemata of boric acid, nitrate of silver, or tincture of iodine, and the prescribing of a strict diet. 4. In true tropical diarrhœa the small intestine is the seat of disease, and it is necessary to insist upon intestinal antisepsis, salicylate of bismuth, sulpho-carbonated water, enemata of boric acid, or, better, of borated infusion of eucalyptus, with abdominal counter-irritation, as by tincture of iodine, or gentle friction with flannel moistened with turpentine. The only method of satisfactory cure consists in an absolute milk diet, to which is added lime-water or Vichy salt. As soon as the stools are formed, beef-tea, peptones, slightly cooked white of egg, raw beef, eggs and milk, and, last of all, rice in milk can be tried. At all times remedies which assist digestion must be employed, while wine and every form of alcohol is absolutely prohibited. When the disease is cured, it is necessary for a long time to watch over the diet, and use remedies that build up the general condition.—*Amer. Jour. Med. Sci.*

TRACHEOTOMY STATISTICS AT L'HOPITAL DES ENFANTS-MALADES SINCE 1886.

Year.	Number of Tracheotomies.	Died.	Cured.	Proportion per cent.
1886.....	356	297	59	16.57
1887.....	365	307	58	15.89
1888.....	360	310	50	13.88
1889.....	261	202	59	21.60
1890.....	296	227	69	23 27
1891	256	175	81	31.64

These statistics show at a glance, notwithstanding the absence of details, the increase in the proportion of recoveries during the last three years. This statement was prepared by Mlle. Deaussoir, Superintendent of the Diphtheria Pavillion, to whose care is owing in no small measure the improvement noticed in the statistics.

As is known, the service in this pavillion passes every three months to the different members of the Visiting Staff in turn, whose methods of treatment vary necessarily; moreover, no mention is made of the different topical applications employed. But, whatever application is used locally, the tonsils and pharynx are always cleansed with the greatest care. Tracheotomy is performed on the upper portion of the trachæ without chloroform. —*Revue des Maladies de l'Enfance*, May, 1892, p. 229.

INSOMNIA IN AN INFANT.

If there exists in the literature any record of real insomnia in very young infants, the fact has escaped my observation. The natural tendency of early infantile life is

to spend itself mostly in sleep. The neurologically healthy babe during the first few weeks of its extra-uterine life is kept awake just as it is caused to cry by some unpleasant or disagreeable excitation. Much of the first six weeks of its existence out of the mother's womb is passed in sleep, A sleepless babe, not subjected to sufficient corporeal pain or irritation to provoke crying, is an anomaly. Yet such is the fact which I have to record of a female infant, five weeks of age, who, without physical or mental provocation, would lie awake with eyes wide open and gaze about in placid contentment throughout the night, unless sleep were induced, as in the more aged, by hypnotics. The child was quiet and tranquil and free from pain or other source of bodily discomfort.

It was well cared for by a faithful and intelligent nurse. Its napkins were always dry and soft, the umbilical cord had separated and the naval had healed, having been carefully dressed with simple cerate and patent lint; colic and constipation had been carefully guarded against. The babe nursed well, the mother had sufficient milk, and its evironments were all favorable to rest and sleep, yet it slept not for several nights and not then until after receiving treatment for insomnia, as an adult would, only in proportion diminished to suit its age.

This insomnia would recur if the treatment were omitted, until about the end of the tenth week. The child then slept without medical assistance and became a vigorous and neurotically tranquil babe.

Sleep was only induced by five-grain doses of bromide of sodium and three-grain doses of chloral put into a small amount of milk and given the babe from a bottle. the chloral once at night and the sodium salt twice or thrice daily for a brief period. Celery and catnip teas and the hypophosphites were also given freely.

This child's mother had been much excited, mentally and nervously, verging on mental aberration, during the period of gestation and before, and required the skill of a practised alienist to avert a puerperal psychical climax after the birth of this infant. The mother was given hypnotics and the bromide salts quite freely during the first few weeks after the birth of the child, which may account for the insomnia not having appeared earlier as a hereditary condition, as it appears really to have been. To my mind, the mother's neuropathic condition before and after the birth and at the time of conception, explains the state of the child. Before the insomnia was arrested some slight chorea became manifest, but this disappeared with the restoration of normal sleep and neural recuperation and central nerve stability.—Dr. C. H. Hughes, in *Alienist and Neurologist.*

HYGIENE.

THE DANGERS OF READY-MADE GARMENTS.

No term, perhaps, possesses a more familiar meaning than the word "parasite." Happy, indeed, would be that animal which, however unconscious of etymology, had not the most intimate relation with it. It seems an almost hopeless task to search for this enviable creature. We should despair of finding it even among the animalcula or in the cell world of histology.

> "So, naturalists observe, a flea
> Has smaller fleas that on him prey:
> And these have smaller still to bite 'em,
> And so proceed *ad infinitum.*"

It is not numbered with the greater beasts. It is not man, whether of high or low degree. The Scottish poet describes, in a humorous poem which is frequently quoted for the pointed lesson it conveys, the career of one well-known parasite which he observed, "plump and gray," strutting on a lady's bonnet at church. A correspondent writing in a somewhat similar vein, confesses to a like experience. She dilates upon "some exceptionally dainty and befrilled hand-made *lingerie,* snowy, spotless, crisp, and garnished with lace," but, she pathetically adds, with "a something half hidden under a tuck." It was, in her servant's *patois*, a "death louse." Need we be surprised that our correspondent adds to her graphic description the warning that all bought underclothing should before wearing be made to undergo "the full laundry process," the more especially since it appears to be quite customary (may the custom early become extinct!) for firms to send even such articles "on approval" to be tried on? What possibilities does this practice open up, not only of parasite migration, but of

the actual communication of disease. It is a veritable method of infection and it has doubtless acted as such more often than we are aware of. The only real remedy, of course, consists in its entire discontinuance. Less than this ought not to satisfy a wholesome public opinion. Until, however, the usage of trade in this particular is above suspicion a careful examination and free ventilation of all purchased clothing should not be omitted, while such further measures as "the full laundry process," and, beyond this, antiseptic fumigation, can never be superfluous.—*Lancet.*

DISINFECTING FOOD.

The Governor-General of Kiév appointed committees last fall to gather the morsels that are left on the table after meals in the large cities, and to send them to the famishing peasants. A large portion of this food comes from communal institutions, such as casernes, hospitals, and from social repasts. The question arose whether it would be possible to disinfect these fragments so that the contagious diseases of the eaters who left them on the table might not be conveyed to the beneficiaries without at the same time destroying the food. The question was referred to the Bacteriological Institute of Odessa, and the following instructions were received in reply: "Morsels of bread left over by persons infected with diphtheria, typhoid, or other contagious diseases, become perfectly disinfected if dried at a temperature of 250° F. But if such a degree of heat cannot be obtained in the drying process, the morsels, before drying, must be submitted to a current of steam of that degree for at least one hour."

THE DISINFECTING POWER OF LYE.

According to the *Revue d' hygiène* for January 20, 1892, Dr. A. Montefusco and Dr. O. Caro have published (*Rivist. internaz. d'igiene*, 1891, fasc. 10, 11) a paper on practical, domestic, and economical disinfection by ordinary lye. After an immersion of twelve hours in a solution of boiling lye, cholera and typhoid bacilli and charbon spores were invariably destroyed. If the solution was kept at a temperature of 20° C., sterilization resulted in in six hours; at 50°C., one hour's immersion produced sterilization; the spores of charbon were not destroyed in one, two, or less than six hours at a temperature of 100° C., whereas in that time the same result was obtained at a temperature of 25° C. The alkalinity of a litre of this solution of lye was exactly neutralized by 315 cubic centimetres of a normal solution of pure oxalic acid. Frequently in Naples and at many Italian hotels linen is bleached by immersion in a solution of lye that requires 500 cubic centimetres of a normal oxalic-acid solution to neutralize it. The destruction of bacilli is equally assured by six hours' immersion in this liquid prepared for domestic use. Gerloczy, of Buda-Pesth, published a paper some years ago recommending lye as a microbe destroyer for fæcal matters; and recently Schimmelbusch and Behring have confirmed his results in experiments made with various micro-organisms.

EARTH-WORMS AND TUBERCULOSIS.

Dr. Lortet and Dr. Despeignes have published (*Lyon Médical*, No. 29, 1892) a report of their investigations regarding the possibility of earth-worms carrying to the surface tubercle bacilli from inhumated corpses, as Pasteur has shown they do with charbon spores. Tubercle bacilli in sputa and sections of tuberculosis organs were buried in the soil of large flower-pots in which several worms were placed. At the end of some months the worms were removed and inoculated in guinea-pigs, which rapidly succumbed to acute tuberculosis. The organs of the worms contained tubercle bacilli, although no lesion was apparently produced by their presence. These results seem to show an additional desirability of cremation.

CONTAGIOUSNESS OF ACUTE TONSILITIS.

Acute tonsilitis is now considered a general disorder from the beginning infectious, and probably of microbic origin. In certain cases infection is manifested by visceral complications (purulent pleurisy, albuminuria, etc). The pus of tonsillar abscesses contains staphylococci and streptococci. In acute superficial tonsilitis the intensity of the fever, prostration and tedious convalescence, militate in favor of infection. The author has noted several cases of acute sore throat following in about eight days, the appearance in the

waiting-room of the "throat" department of the hospital, of a case of tonsilitis. There had been no previous cases for a long time. These facts seem to prove its contagiousness, although this is not the sole means of the spreading of the disease.

He considers that antiseptic treatment should be instituted and the predisposed persons should be removed from the locality.—Richardiere, *Rev. de Laryngol. d'Otolog., etc.*

MEDICAL CHEMISTRY.

REAGENT PAPERS FOR URINE TESTING.

The pharmacist may do his physician friends a service at but slight expense to himself by preparing and keeping on hand reagent papers for testing urine for albumin. These are made of good thick filter or blotting paper, as follows: Saturate a sheet of paper with a concentrated solution of citric acid, and let dry. Saturate another sheet with a 3-per-cent solution of corrosive sublimate in a twelve-per-cent solution of potassium iodide (mercuric chloride 3, potassium iodide 12, distilled water 100 parts. Dissolve the potassium iodide in the water, and afterward add the chloride, and dissolve.) Dry this sheet also, and cut both sheets into strips two inches long by one-half wide. Put them up in separate packages and label one "acidifying paper," and the other albumin test paper. In use first acidify a small amount (say 1 ccm.) of the urine with the acidifying paper, then add the test paper, and shake. If albumin be present in a greater proportion than 1:10000 it will manifest itself by separating in flocculent masses.

SPURIOUS SALOL.

It appears that recently some spurious mixtures have been retailed as pure salol. The pure article is found to be readily identified by placing a few drops of nitro-sulphuric acid in a watch-glass and adding a little salol powder. The mixture soon takes a yellow color and, on being stirred about with a glass rod, this color passes to brown, and then to green. As soon as this coloration has been noticed, the watch-glass and its contents are placed in a porcelain measure with about three-quarters of an ounce of water, and the mixture shaken up. The liquid then takes a rose color, and the green color again appears if ammonia is added to the liquid. When resorcin is treated exactly in the same manner, the mixture becomes immediately of a very dark blue color. If then it is treated as above with water, a red color derived from resorcin, is produced, but by the addition of ammonia, it turns blue and not green, as is the case with salol.—*American Lancet.*

RAPID AND ACCURATE METHOD OF DETERMINING FAT IN MILK.

The following paper on this subject was presented by Dr. Henry Leffman and Dr. W. Beam, of Philadelphia, to the Society of Public Analysts at a recent meeting held in London:

Among the processes for the rapid determination of fat in milk, those employing centrifugal machines have been most satisfactory. A procedure devised by us has proved, in the experience of others as well ourselves, rapid, accurate and economical.

For the test we employ a bottle holding about 30 cc., the neck of which is graduated so that a volume of 1½ cc. is divided into 86 equal parts. Fifteen cc. of the milk being taken, each of these represents 0.1 per cent. by weight, of butter fat. The test is made as follows:

Fifteen cc. of the milk are put into the bottle, 3 cc. of a mixture consisting of equal parts fusel oil and strong hydrochloric acid are added, mixed, and strong sulphuric acid poured in slowly, with agitation, until the bottle is filled nearly to the neck.

The liquid becomes hot and the casein is completely dissolved, a dark reddish-brown solution being formed. The neck is filled to near the zero point with a hot mixture of sulphuric acid and water, and the bottle whirled in the centrifugal machine for from one to two minutes. Milk very poor in fat may require from three to four minutes. The volume of fat which rises in the neck can be read off directly or by the use of a pair of dividers.

The points of these are adjusted at the upper and lower limits of the column of fat, allowance being made for the meniscus; then the dividers being placed so that one point coincides with zero of the scale, the exact volume can be read off. If but one test is to be made it will be necessary,

of course, in order to preserve the balance of the arms of the machine, either to make duplicate mixtures or to fill the other test bottles with diluted sulphuric acid.

We give herewith the results of comparative tests with the Adams method, care being taken that the paper used was free from any extractable matter.

The bottles employed in these tests were divided into 100 parts, and the figures here given were obtained by multiplying by the factor 0.86. (As noted above, we now use a bottle divided into 86 parts, and thus save calculations.)

WHOLE MILK.

Sample.	Fat by Adams method.	Fat by centrifugal method.
No. 1.	3.534	3.53 3.56 3.56
No. 2.	3 90	3.95 3.99 3.95
No. 3.	3.03	2.97 2.97 2.93

SKIMMED AND WATERED MILK.

No. 4.	0.56	0.51 0.51

Another determination was made of sample No. 4 by boiling down to one-half volume and treating by the method, the results being calculated to the original volume. This gave 0.55 per cent of fat.

Tests were made to determine the effects of longer rotation in the examination of milks poor in fat. Thus, by four minutes' whirling the last sample gave, with previous concentration, 0.55 per cent of fat.

Comparisons have also been made between the results of this method and the figures for fat as determined by calculation from the specific gravity and total solids, basing the calculations on the Hehner and Richmond tables, and the results of the comparisons are tabulated below:

Sample.	Fat by calculations H and R.	Fat by centrifugal method.
No. 5.	3.60	3.61
No. 6.	4.15	4.10

We find as a result of many tests, that with bottles accurately graduated, and reasonable care in manipulation, especially sufficient rotation, results will be obtained within 0.1 per cent of those of the standard methods.—After *The Analyst*.

NEWS AND MISCELLANY.

CARRIER-PIGEONS AND VACCINATION.

At the last meeting of the Academie de Medecine, Dr. Hervieux, who presides over the Public Vaccination Department at the head-quarters of that learned body (vaccinations from the calf are performed gratuitously at the building in the Rue des Saints-Péres every Tuesday, Thursday and Saturday) read a report by an army surgeon, M. Stroebel, on the transport of vaccine by carrier-pigeons. It appears that one pigeon is capable of conveying in one journey from five to six tubes. The utility of this means of transport in times of war is very obvious, and one can imagine the joy of the representatives of the Army Medical Department at the apparition of a flock of these swift vaccine carriers in a besieged town.—*Lancet*.

THE BACILLUS OF SOFT CHANCRE.

About three years ago *La Riforma medica* published a description by Dr. A. Ducrey of a microbe that he had found in soft chancres, and that he regarded as the cause of that disease. He inoculated, with antiseptic precautions, pus from soft chancres in a series of five or six subjects. While the sores resulting from the first inoculations contained numerous microbes, he did not find more than a single one in the last. The bacillus was short and thick, having rounded extremities, often with a lateral groove, and was either isolated or in chains. He was not able to cultivate it in any of the media employed in the laboratories.

In the June number of the *Annales de Dermatologie et de Syphilgraphie*, Dr. Pusey reports the discovery by Dr. Unna of a bacillus that seems to be the pathogenic agent of the soft chancre. It occurs in the form of chains of two or more bacilli, and is most numerous in ulcerated tissue, though it is found between the cells of the environing tissue. It may be isolated in microscopic preparations by coloration with methylene blue, and then declorized with stryone or ether and diluted glycerin.

This is the only bacillus encountered, and Unna has found it in every soft chancre excised and examined by him. It is found in the tissue alone, unassociated with other microbes, being distributed in a

peculiar manner, and it is not found in simple ulcers or in initial indurated sores. Apparently no effort has been made by Unna to cultivate this organism, or to demonstrate its pathogenic character by inoculation. Ducrey's inoculation experiments were a repetition of the oft-repeated experiments of inoculating the pus of a soft chancre, and they can not be regarded as demonstrating the pathogenic character of the micro-organism be found. In a recent number of the *British Medical Journal* there is a note stating that Quinquaud has confirmed Unna's discovery, having found a bacillus present in prodigious numbers in the lymphatics and intercellular spaces. The question is well worth further investigation, if only to demonstrate that the micro-organism causing soft chancre is but a more virulent form of some well-known bacillus.—*N. Y. Med. Jour.*

THE CONGRESS OF TUBERCULOSIS IN 1893.

According to the *Revue General de Clinique et de Therapeutique* for July 13, 1892, the following questions are to be discussed at the Congress of Tuberculosis in July, 1893: 1. The respective rôles of contagion and heredity in the propagation of tuberculosis. 2. Infectious diseases as agents provocative of tuberculosis; the rôle that is played by certain of them in the localization of tuberculosis, such, for instance, that of gonorrhœa in the development of tuberculosis of the testicle, and that of grippe in the development or aggravation of pulmonary tuberculosis. 3. Remissions in tuberculosis; the duration of these remissions; the methods of recognizing them and of preventing their cessation; the causes of recurrence. 4 The various methods of diagnosticating bovine tuberculosis, especially in determining if inoculation is a sure and certain method of establishing the diagnosis of tuberculosis in cattle. 5. The dangers that may follow the inhumation of tuberculous corpses; the opportuneness of substituting cremation for inhumation; the necessity of destroying the tubercle bacilli in corpses. 6. New methods of prophylactic and curative treatment of tuberculosis, based on its ætiology. 7. The utility of a general inspection of meat. A prize of $600 (3,000 *f.*) will be given for the best work on the question of "The methods of diagnosticating latent tuberculosis before its appearance or after its cure."

THE MORAL SIDE.

In an address before the Marion-Sims College (*Alienist and Neurologist*, July, 1892) Dr. C. H. Hughes says:

The study of the physician includes the moral as well as the physical well-being of man, for the purity of the soul has much to do with the health of the body. The purity of the heart and the dominance of the body by principles of rectitude has much to do with the health and consequent happiness of present and succeeding generations. The direct and hereditarily entailed diseases which are the offspring of sin, and *vice versa*, which have filled and are filling the land with misery and woe, both physician and divine are alike especially interested in preventing. The psychology of sin and the pathology of crime are studies alike for doctor and divine.

The man who is sick in his soul is seldom well in his body, and the soul's affairs do not prosper well when the body is disordered.

Like the divine, the physician may also aid in healing "the wounded in spirit and the broken-hearted," and in "binding up their wounds." He may "minister to a mind diseased," and "with sweet oblivion's antidote cleanse the stuffed bosom of that perilous stuff which weighs upon the heart." He does this effectually through the modern successful management of melancholia.

SIR JOSEPH LISTER.

The retirement of Sir Joseph Lister from his post as Lecturer on Clinical Surgery at King's College marks an epoch in the history of the branch of medicine in which he has made such an indelible mark. The rule which provides for the resignation of teachers on attaining the age of sixty-five—salutary enough under ordinary circumstances to make one wish that even less latitude were allowed—occasionally strikes one as harsh and oppressive. In spite of the tendency to physical degeneration which pessimists recognize as the product of an advanced civilization, Sir Joseph Lister still appears as active and as able as when his fertile discovery opened

up fresh horizons in surgery and gave the British School of Surgery an *éclat* which it has since fully maintained. Sir Joseph retains by special grace, his post as surgeon to the hospital for another year.—*Med. Press.*

FOLK MEDICINE IN RUSSIA.

Slovo, of Kiév, reports some curious instances of popular doctoring in South Russia. The rural dentist places his patient upon a little stool and examines him. If an upper tooth is to be pulled he preforms the operation with a simple pair of tongs like that used by cobblers. But if a lower tooth is to be extracted the operation is more complicated. The tooth is tied very skilfully with a violin string. The other end of the string is fastened to a hook in the ceiling. Then the stool is removed with a jerk from beneath the patient, who falls, his tooth remaining on the string, sometimes with the flesh around it. Intermittent fever is cured either by live frogs or by fright. When the sickness breaks out the patient is made to carry about him as many live frogs as can be put in his clothes. If that treatment does not help the patient his fellow-villagers try to frighten him. The most popular method of doing that is known by the name of Likaniye. A crowd of men and women come into the house and raise a quarrel with the patient. They treat him to the loudest and most offensive terms of reproach. That naturally irritates him, and he answers in similar terms. The crowd takes offence at his rude expressions and resolves to lynch him. A rope is put around his neck and he is dragged about until insensible on account of fright.—*The Sun.*

PROFESSOR VIRCHOW ON SICK NURSING.

Where the State controls and subsidizes hospitals, many difficulties occur from which our voluntary system happily exempts us. Among these is what is called "the religious question in nursing." Occasional differences have arisen from time to time in one or other of our hospital establishments, but the strength of the voluntary system is that it admits of great variety and individual adjustment; so that each form of opinion finds the opportunity of development and representation at one place or other, and in its own appropriate form. In Paris the forcible intervention of the municipality has been a great source of heart-burning and dispute, which is not yet allayed, the religious sisterhoods having been evicted from most of the hospitals. In Berlin the same conflict is arising, and in the course of a recent debate in the Berlin Municipal Council, Professor Virchow is reported to have said: "Everybody knows how the struggle between creeds and creedlessness has developed in our days, and how it is constantly becoming keener. Everybody knows that creeds claim supremacy in the tending of the sick, but we are profoundly interested in keeping away this conflict from the sick bed and in permitting the spirit of humanity alone to assert itself there. It is not easy effectually to accomplish this, but the community can and ought to interfere positively in this matter, for it establishes numerous hospitals, and thus has an opportunity of providing for the training of sick nurses without regard to creed. No patient is asked of what religion he is, but is only examined to ascertain whether he is ill and needs to be received into such an institution. Similarly, the sick nurses, who self-sacrificingly devote their services to the sick, ought to be shielded from all religious controversy. We must also not overlook the private tending of the sick in the city, and by means of our schools for sick nurses in the hospitals we ought to provide persons who will protect the patients from the intrusion of religious arrogance. I remark, however, that I am far from accusing religious attendants on the sick of inhumanity or deficient sense of duty." This naturally gives great umbrage to the orthodox and Ultramontane journals, who discuss this utterance with bitter indignation, and complain that while spoken in the name of freedom, it savours of intolerance.—*Brit. Med. Jour.*

NEW METHOD OF EXAMINING SPECIMENS OF BLOOD.

A method of making permanent preparations of blood has recently been described by Dr. R. Muir in the *Journal of Anatomy*, which promises to be of great

use in clinical investigation. The specimens thus prepared can be preserved indefinitely, and compared with others obtained from the same patient at subsequent periods. The method is quite simple. The films are prepared on cover-glasses in the usual way, and, before they have time to dry, are placed in a saturated aqueous solution of corrosive sublimate (to which a little common salt may be added) for half an hour. The corrosive sublimate is then washed away with a three-quarter per cent. solution of common salt, and the film is further hardened by a few minutes' immersion in methylated spirit and then absolute alcohol. The specimen can then be stained by the ordinary reagents, very good results being given by double staining with eosine and hæmatoxyline, the red corpuscles being stained by the eosine, while the nuclei of the leucocytes are prominently revealed by the hæmatoxyline.—*Lancet.*

TRAINING BY HYPNOTISM.

The present system of keeping criminals in prison in order to ensure a brief respite from their evil practices is obviously open to criticism from a moral as well as from a prophylactic point of view. The delinquent leaves durance vile a sadder, but not by any means a wiser, man. Hence any method of "suggesting" the propriety of reform becomes a matter of interest. Dr. Bérillon, of Paris, claims to have had great success in the treatment of various bad habits in children by hypnotic suggestion. He finds that eight out of ten healthy children are readily amenable to hypnotic influence, and can thus be effectually weaned from their evil practices, whether these be of a minor and physical form, such as nail-biting, or stammering, or a more serious form, such as a preference for untruthfulness, kleptomania, mere laziness, or cowardice or moral perversity. The next step will doubtless be to galvanize lads afflicted with a chronic indispositon to exertion into a commendable love for study. In the meantime, Dr. Bérillon should be invited to "try his hand" on kleptomaniacs and perverters of the truth who have long since left school. In spite of the fact that the merit of good conduct is minimized by the reform being made compulsory, it would be a boon if, instead of sending kleptomaniac ladies of birth and education to prison, the magistrate were empowered to order them to undergo a hypnotic *séance*, the hypnotizer being required to go bail for their future good conduct. Other things being equal, hypnotism might be preferable to circumcision as a cure for onanism or genito-urinary incontinence, while as a remedy for stuttering, it would have the merit of restoring speech without the tedious course of training which Mr. Behnke and his congeners have found necessary. One is disposed to take a less pessimistic view of life in view of the possibility of hypnotizing children out of the habit of throwing stones at trains, of rendering them truthful, industrious and cleanly, and of desisting from the habit of worrying adults of peaceful proclivities. If Dr. Bérillon can effect this, or even a small proportion of it, he will have earned the gratitude of future generations.—*Med. Press.*

THE EVILS OF MEDICAL EXPERT TESTIMONY.

In a paper published in the July number of the *New York Medical Examiner*, Dr. B. Sachs has called attention to some of the evils attending the methods of eliciting medical expert testimony in our courts at the present day. The principal evils are that the experts are called by the parties to an action instead of by the court itself; that the medical testimony is elicited on verbal examination and cross-examination in court; that the object of such cross-examination is not so much to prove that the data upon which a judgment was founded are wrong as that the person who has passed this judgment has improper motives for appearing in the case or is ignorant of, or has possibly forgotten, some facts, of minute anatomy, that are entirely irrelevant to the case. The author suggests that a law be enacted that will reform the present condition of affairs, and that the expert should be called by the Court, so as to secure impartial testimony and unbiased judgment. —*N. Y. Med. Jour.*

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Selections.

REMARKS ON HAFFKINE'S METHOD OF PROTECTIVE INOCULATION AGAINST CHOLERA.

By E. H. HANKIN,

FELLOW OF ST. JOHN'S COLLEGE, CAMBRIDGE; CHEMICAL EXAMINER, ANALYST AND BACTERIOLOGIST TO THE NORTH-WEST PROVINCES, INDIA.

As I have recently been subjected by M. Haffkine to his anti-cholera inoculations, I propose to give an account of my experiences and a description of the method employed in the production of the vaccine.

In the course of his researches on the cholera vibrio which have been carried on during the last two years, M. Haffkine has met with many facts which tend to remove the difficulties that have hitherto stood in the way of accepting this microbe as the cause of cholera. Among these difficulties may be mentioned the impossibility of reproducing a disease in any way resembling human cholera by injections of Koch's vibrio into animals. M. Haffkine has recently succeeded in doing this in rabbits by a very simple and ingenious method. It is well known that the blood serum of the rabbit has the power of killing the cholera microbe. By cultivating the vibrio, first in diluted and then in undiluted rabbit's serum, M. Haffkine has succeeded in "acclimatising" it, so that at length it is completely unharmed by the bactericidal action in question. If a small quantity of a culture in rabbit's serum of these acclimatised vibrios be injected into the veins of the rabbit, the animal will succumb, showing symptoms which M. Haffkine assures me are extremely similar to those of typical cholera. During the collapsed condition that precedes death, cramps are frequently observed, and on *post-mortem* examination the intestine is found to be filled with the typical "rice-water" secretion. The latter, and also the mucous membrane of the intestine, contain the vibrios in large numbers. In some cases they have been found in the bile duct and ureter, but never in any other part of the body. Generally these symptoms appeared within a few days of inoculation, but more rarely the animal remained in apparently good health for periods extending to a couple of months before the symptoms developed. These latter experiments suggest an explanation of those anomalous cases in which a patient has been observed to succumb to a second attack of cholera during the same epidemic. Perhaps he had never been really free from the virus after his first attack. The cholera may have existed in a latent condition, as was the case with these rabbits. I owe my best thanks to M. Haffkine for his permission to mention these results. It is to be hoped that he will soon publish an account of them in detail.

In this, as in many other cases, the first step towards obtaining a protective vaccine was the preparation of an abnormally virulent form of the microbe, the so-called *virus fixe* or *virus exaltè*. M. Haffkine succeeded in this by passing the microbe through a series of guinea-pigs. If a guinea-pig is inoculated into the peritoneum with a suspension of an agar culture of the microbe, it will succumb, and in the peritoneum is found an exudation containing a larger or smaller number of the vibrios. If this exudation is injected into the peritoneum of a second guinea-pig, the latter will also succumb, and so on with a third; but, unless certain precautions are taken, the series cannot be kept up. Each successive exudation will be found to contain fewer and fewer microbes,

and at last the total number of microbes present will not be sufficient to kill the next guinea-pig in the series. To avoid this result a procedure has been adopted based on the following facts: The quantity of exudation formed varies in different cases. Usually, if a large guinea-pig is employed, a copious exudation, containing relatively few microbes, is produced. A small guinea-pig, on the other hand, yields a small quantity of exudation rich in microbes. Apparently the quantity of the exudation is a measure of the power of resistance possessed by the individual. M. Haffkine has based, on these facts, his method of passing the microbe through a series of animals. A guinea-pig is inoculated into the peritoneal cavity with cholera vibrios from an agar culture. On its death the peritoneal exudation is removed with a pipette, placed in a test tube, and left for several hours at the temperature of the room. If it is abundant (several cubic centimetres), it is then injected into the peritoneum of a small guinea-pig. If, on the other hand, it is small in quantity (1 cubic centimetre or less), it is injected into a fully-grown animal. On the death of the animals in the former case, the liquid injected will be found to have become concentrated; in the latter case, an increase in quantity will be observed. By attending to these precautions, the cholera virus can be passed through an indefinitely long series of animals. From each exudation in a series, an agar culture is made for the purpose of controlling the purity. Each successive culture will be found to be more virulent than its predecessors; also the guinea-pigs in the series die in shorter and shorter times after injection of the exudation. Between the twentieth and thirtieth passage the maximum degree of virulence appears to be reached. At this stage the peritoneal exudation is fatal to guinea-pigs in six to eight hours after its injection into the peritoneum. Agar cultures made from such an exudation also possess and retain this increased degree of virulence. Microbes from these cultures can kill rabbits and pigeons in doses which would be perfectly harmless if given in cultures of the ordinary degree of virulence. In fact, this *virus exalté* appears to be about twenty times as virulent as the ordinary form of the microbe.

As above stated, this *virus exalté* is rapidly fatal to guinea-pigs when injected into the peritoneum. It also kills them with certainty when introduced into the intestine or when given *per os* after neutralization of the gastric juice with soda and quieting the intestines with opium according to Koch's method. It also differs from the ordinary form of the microbe in that it kills guinea-pigs when injected in small doses into the depth of the muscular tissue of the thigh.

If, however, it is injected under the skin, the *virus exaltè* does not kill the animal; it produces a purely local malady. After a few hours an extensive œdema develops. In a few days the necrosed mass of tissue drops off, leaving a granulating wound. This at length heals completely. The animal is now found to be immune against inoculation with cholera in any way whatever, whether it is tested with ordinary or with strengthened virus, and whether it is introduced into the peritoneum, the intestine, or the muscular tissue. Obviously, however, such a method of inoculation could not be practically employed. It is necessary to devise some method of first protecting the guinea-pig against the necrosis produced by the *virus exalté*. This can be accomplished readily by a previous treatment with attenuated virus.

The attenuated virus is prepared by growing the microbe in a slow current of air. About 10 cubic centimetres of bouillon is placed in a flask having two lateral tubulures, and inoculated with the strengthened virus. The flask is placed in an incubator at a temperature of 39° C., and by means of a tube connected with one of the tubulures at one end, and, passing outside the incubator to a water-pump at the other, a slow current of air continually passes over the surface of the bouillon. The other tubulure of the flask is connected with a wash-bottle containing water and placed in the incubator, in order to saturate the entering air with aqueous vapor. This precaution is necessary to prevent undue evaporation, as the bouillon only forms a shallow layer at the bottom of the flask. Under these conditions the microbes produce a culture, but then rapidly die. It is therefore necessary to reinoculate them every third day into a fresh flask of bouillon. After each passage the microbes are found to be more and more attenuated. At last, after a series of passages under these

conditions, the microbes are found to be so altered that they have completely lost the power of producing necrosis in guinea-pigs even when injected under the skin in exaggerated doses. They however, retain the power of still killing these animals when injected into the peritoneum in quantities only slightly larger than is necessary to attain this result with the ordinary virus.

If a dose of this attenuated virus, (say one-eighth of a twenty-four hour old agar culture) is injected under the skin of a guinea-pig an extensive œdema develops within twenty-four hours. During the next few days this diminishes in size, leaving, however, a hard nodule, which persists for a considerable time. If a week later the animal is inoculated with a similar quantity of the strengthened virus an œdema develops, which is less than in the first case and does not lead to necrosis. When tested a few days later the animal is found to have acquired an immunity against the cholera microbe in whatever way it may be inoculated. This immunity has been found to be undiminished a couple of months after treatment.

Rabbits have also been made immune by the same method. They then show themselves refractory to every form of inoculation, including the method above described, which in the control animals leads to a disease resembling the cholera of human beings. M. Haffkine has also produced this immunity in pigeons. These facts led M. Haffkine to try the effect of these inoculations on himself, and afterwards on seven other gentlemen. The following is the account of my own case:

August 16th, midday, Dr. Roux inoculated me with one-eighth of a 24-hour old agar culture of the attenuated virus suspended in 1 cubic centimetre of bouillon in my left side, about 2 inches above the crest of the ilium. 1 P. M. Slight pain locally. 4 P. M. Swelling noticeable, and pain on movement. 8 P. M. Owing to pain on moving found walking about difficult. 10 P. M. Temperature began to rise; noticed a feeling of *malaise*. 12 midnight. Noticed temperature of 100°. This was the highest point reached.

August 17th. 7 A. M. Woke up; felt better; temperature normal. The swelling formed an area about 9 inches long and 2 or 3 wide, extending towards the inguinal lymphatic glands; painful on pressure, and reddened. 12 midday. During the day I worked as usual in the Institut Pasteur, but had a bad appetite and a feeling of fatigue, which once or twice impelled me to lie down for a short time. 3 P. M. The swelling extended during the day to the crest of the pubes and to within an inch of the umbilicus. This secondary extension of the swollen area was not painful on pressure, or reddened. 7 P. M. Felt bilious. 9 P. M. Took four capsules of castor oil.

August 18th. Woke up, feeling all right after a sound sleep; pain notably diminished; could walk about with ease, and went to a swimming bath.

August 19th. Swelling and redness of skin greatly decreased; pain on pressure trivial.

August 21st. 6 P. M. Inoculation with one-eighth of an agar culture of *virus exaltè* suspended in bouillon. The injection was made on the center of the inner side of the left arm. 11 P. M. Painful area extended to axilla; slight and occasional headache.

August 22. 4 P. M. Woke up; found it difficult to get out of bed owing to pain, but in a few minutes became accustomed to change of position, and walked about with ease; a slight *malaise* and fever. 6. A. M. Felt better. 9 A. M. Breakfast, good appetite. During the day, August 22nd, slept most of the time, but was awakened every hour to take my temperature; in the evening felt bilious and constipated; took about ½ ounce of liquorice powder; the swelling now extended from the axilla nearly to the elbow; this area was very sharply defined by the redness of the skin. Slept well all night.

August 23rd. Woke up feeling quite well. Pain had decreased, but the swollen area had extended, reaching about 3 inches below elbow. This secondary extension of the swollen area was not painful on pressure, and the skin had a normal color.

August 24th. Pain and swelling notably decreased. Skin beginning to assume a yellow hue.

August 25th. Further decrease of swelling. For an area measuring about 5 inches by 3, the skin was colored yellow.

No enlarged glands were noticed all through the experiment. At present the only trace of the inoculation is a small hard nodule, less than half an inch in diameter, at each seat of injection.

With regard to these inoculations I should like to point out that although the œdematous swelling develops with startling rapidity, there is no reason for considering it as likely to lead to any dangerous inflammation. The cholera microbe is not one that is capable of producing pus. Knowing this fact, neither M. Haffkine or I made any attempt to keep quiet or rest ourselves after our inoculation. M. Haffkine happened to be busy after his first inoculation, and in spite of his fever worked for twenty-four hours continuously in the laboratory without food. Two hours after my second inoculation I experienced the first part of my fever. It is noteworthy that both M. Haffkine and I had more fever after the second inoculation than after the first. All the other gentlemen who have been inoculated experienced only a trivial elevation of temperature and

of discomfort after their second inoculation. Probably this is due to the fact that M. Haffkine and I had our second doses at comparatively short intervals after the first (five and six days respectively), and, as experiments on guinea-pigs indicate, these intervals were too short for the immunifying effect of the first dose to have completely developed.

The seven other cases presented symptoms essentially similar to my own, only, as above mentioned, the second inoculation (which was made after seven or eight days) produced far less general and local disturbance than the first. In two or three cases a transient constipation has been observed to follow the inoculation. In one case diarrhœa had been present for some days before the first inoculation, and vanished the day after it was performed.

M. Haffkine finds that it is also possible to vaccinate guinea-pigs by means of cultures previously sterilized by heat. In these cases the local reaction appears to be less than occurs after inoculation with living cultures. The immunity produced, however, does not seem to be of such a permanent character as that produced by the living microbe. It is possible, nevertheless, that for inoculations on human beings it may be well to commence with sterilized cultures, in order to diminish, as far as possible, the discomfort produced by later inoculations with the living virus.

I may mention here that in all his experiments M. Haffkine employs cultures on agar in preference to those in bouillon. The latter contain far more soluble poisons than the former, and there is reason for thinking that, as with the allied microbe the vibrio Metschnikovi, it is the less readily soluble substances contained in the bodies of the microbes that are concerned in the production of immunity.

What proof have we that these inoculations are of any value whatever in protecting human beings against cholera? If the cholera vibrio is really the cause of this disease, the conditions of infection that obtain in Nature and in the laboratory must be widely different. How, then, can success in producing immunity against "laboratory infection" of a guinea-pig justify us in concluding that we have obtained immunity against "natural infection" of a human being? Obviously we have no direct and absolute demonstration of the value of these inoculations, and no doubt those people who need such proof before they are convinced will feel themselves justified in being "dead certain" of the futility of M. Haffkine's method for a considerable time to come.

In the first place it may be noted that the fact that there is a difference—it may be a great difference—between artificial and natural infection, though suggesting a source of error, is not of itself a reason for thinking that immunity against the one is not immunity against the other. In discussing the probability of an animal or a human being being immune against a particular microbe, we are concerned not so much with how the microbe can get into the system, but with what it does or does not do when it gets there. If any animal has been made immune against the cholera microbe, it has always been found to be capable of resisting it, in whatever way it may have been introduced into the body. Consequently, if a human being has been made immune against the offects of the cholera microbe when injected under the skin, analogy suggests that he is immune against the same microbe when it seeks to enter the system by the natural way, whatever that may be. But are those gentlemen who have been inoculated by M. Haffkine immune to the effects of the cholera microbe when inoculated under the skin? This is a matter which can be put to the test with great facility. The effects of a subcutaneous inoculation of the attenuated cholera microbe on a human being may be said now to be well known and easily recognised. There is a widespread and rapidly developing œdematous swelling and redness, which only vanish gradually after the lapse of several days. A small hard nodule also appears at the seat of inoculation. These changes may be regarded as a distinct character of the cholera inoculation. The fever and *malaise*, on the other hand, can not be so regarded; probably a similar injection of almost any microbe would produce a similar elevation of temperature.

Consequently, the presence or absence of a "local immunity" in a human being who has been subjected to M. Haffkine's treatment can be readily tested by a repetition of his first injection, namely, that of the attenuated virus. M. Haffkine has conceived the good idea of performing this experiment five weeks after his inoculation with the strengthened virus. After

the injection a swelling rapidly developed, and as rapidly disappeared. It had almost gone in twenty-four hours, leaving no hard nodule, as had been the case with the previous inoculations. The result is sufficiently striking when it is remembered that the œdema produced by the first inoculation in M. Haffkine's case took nine days to disappear. As might have been expected, a passing rise of temperature was produced, but this also took place in a guinea-pig that had received the same repeated inoculation, and that had previously been proved to be perfectly immune against cholera on several occasions.

Another objection suggests itself. Dr. Cunningham has isolated several distinct and permanent varieties (or as he prefers to call them, species) of the cholera microbe. Will immunity against one of them confer immunity against another? M. Haffkine's vaccines have been prepared from a cholera microbe of Indian origin, and his inoculated guinea-pigs have shown themselves to be immune against this race. Considering the number of different varieties—a dozen or more—that Dr. Cunningham has described, it is, to say the least, improbable that a chlorea microbe isolated two months ago from a case in the Necker Hospital in Paris should be of identically the same race as the one of Indian origin that has been so long in use in the Pasteur Institute. M. Haffkine finds that a guinea-pig that has been prepared by his method is just as refractory to one microbe as to the other.

Is this method of inoculation likely to confer a permanent immunity? To this question no definite answer can be given as yet. Guinea-pigs inoculated by the same method as has been employed for human beings have been found after two months to have lost none of their immunity. *A priori,* it is far more probable that an inoculation with *virus exalté* should confer a lasting immunity than a slight attack of cholera. In human beings the immunity can always be tested from time to time by a subcutaneous inoculation. In the event of a lasting œdema being produced by this test inoculation, it can form the starting point for a repeated treatment. It may be noted that there is no reason for thinking that this method of inoculation could be any sourse of danger to other individuals. There is, on the other hand, every reason for believing that the microbes injected are rapidly destroyed in the body, most probably *in situ.*

Lastly, it is important to remember that very probably after the first inoculation, less probably after the second, there may be a temporary diminution in the power of resisting the entry of the cholera microbes. Most probably within three or four days of the injection the power of resisting the attack of the cholera microbes has returned to normal, and after that time will continue to increase. If this is so, these inoculations should not be practised in a given place at the time that an epidemic is raging, without great caution. Before forming a definite conclusion with regard to this, further experiments on animals are needed.

The evidence at present existing shows that M. Haffkine's method of inoculation is not attended by any grave disturbance of health, and that it can be practised on human beings with perfect safety. The fact that it produces immunity against cholera in any form, in animals of such widely different organization as guinea-pigs and pigeons, gives reason for hoping that it may produce an equally good effect in human beings, but it must necessarily be a long time before we can possess any evidence of any value on this point.—*Brit. Med. Jour.*

SALOPHEN.

Siebel (*Therap. Monatshefte,* January, 1892) says that salol was introduced on account of some of the unpleasant symptoms produced by the salicylates. Salol, however, has not been found harmless, and is contraindicated in cases of renal disease. Salophen is a combination of salicylic acid with acetylparamidophenolether.

It is split up into these two constituents by pancreatic ferment, but not by the acid gastric juice. Any of the drug not so decomposed has been found to be excreted with the fæces. Salophen hinders decomposition when in such quantity as to provide sufficient salicylic acid. It is without taste or smell, and has very feeble toxic properties. At most, symptoms of salicylic acid intoxication would be produced, for the other constituent is without poisonous qualities. Dr. Guttman has spoken favorably of the clinical properties of salophen.—*Brit. Med. Jour.*

Communications.

WHEN SHALL WE TREPHINE IN FRACTURES OF THE SKULL?*

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Not so very long ago (a dozen years) the only indications supposed to demand operation, in fractures of the skull, were embraced in these rules:

1. In *compound*, *comminuted* fractures, *with or without brain symptoms*, the depressed bone should be elevated and the fragments removed to be rid of the irritation the spiculæ will produce and to avoid the inflammation of the brain and its membranes such irritation would be likely to set up

2. In all cases of *local* injury to the skull whether fracture or bruise, followed by a clear evidence of inflammation of bone and persistent symptoms of brain irritation, or of pus between the bone and dura mater, the trephine should be resorted to.

3. Punctured fractures almost invariably lead to inflammation of brain, sooner or later—are the most dangerous of all fractures—and require the use of the trephine *with or without* the presence of brain symptoms.

Upon the contrary it was thought: "Never operate unless the symptoms *are urgent*" (with the above exceptions); in diffused injuries to the cranium and its contents, "operative procedures are *never* justifiable, since the injury is not limited to one point and cannot be relieved by an operation;" and finally "in compound fractures, *even with depression* if not comminuted, an operation should be performed unless the symptoms of compression from local pressure are great;" trephining in gun-shot fractures was almost unknown. Such were the directions of one of our best teachers in 1880.

Now we know that we should operate *in every case* of fracture with depression, even if there be no symptoms whatever; in many diffused injuries trephining is indicated; gun-shot wounds of the skull should invariably be followed by operation, and some go so far as to say that even simple fissure ought to be treated by trephining. Thus the late Dr. D. Hayes Agnew (*University Medical Magazine*, October 1891) in discussing the subject of traumatic epilepsy says: "It is not saying too much to assume that surgery is responsible for the great majority of traumatic epilepsies. The old members of our profession cannot, of course, be held responsible for not practising those methods which time, observation, vivisection and knowledge derived from collateral branches of study have made possible. They said that human life is too precious a thing to be jeopardized by overstepping the bounds of a wise conservatism. On the other hand no charity can release him from responsibility, who, from being wedded to old traditions and who can discover nothing valuable outside of his own narrow horizon, declines to keep step in the grand procession. The doctrine that depressed fractures of the skull without symptoms require no operative interference, a doctrine which in the past has been so deeply rooted in the professional mind, I hold to be responsible for very many of the unfortunate sequels of head injuries. However small may be the depression which follows a fracture of the cranium, save in one or two localities, it will encroach enough upon the dural nerves to cause more or less irritation, which, though insignificant at first and not at all recognizable to the consciousness of the patient, yet eventually will be propagated to the cortex and brain ganglia until finally the paroxysmal explosion occurs. * * * Whenever, therefore, in my judgment, the profession can accept the doctrine that *all depressed fractures of the cranium, however slight may be the depression, and entirely irrespective of pressure symptoms are proper subjects for trephining,* then will traumatic epilepsy largely disappear; indeed, I am sure that he who shall propose to tabulate at the end of the next twenty-five years the cases of epilepsy will find, as compared with the present time, a meagre supply for his purpose. It is not improbable indeed, in view of the greatly diminished risk from trephining, *that the operation will be extended even to cases of simple fracture or fissure of the skull.*"

The reason assigned by Dr, Agnew is that no surgeon, however skilled, can

*Read before the Jackson County Medical Society.

determine, without operation, what has happened inside the skull, even in a simple fracture; therefore the necessity for inspection of the interior as well as exterior surface; which is in conformity with the statement of Bouillaud that no blow upon the head, however insignificant it may appear to be, is too slight to excite anxiety regarding the future. For the sequel may be long delayed; as says Dr. Allen McLane Hamilton (*Pepper's System of Medicine*, Vol. v. p, 471): "It is quite common to find old fractures, with depressions which have existed for years without any seeming bad effects, suddenly lighting up convulsions under the influence of some new excitement." Nor, as Agnew says, must there be anything more than a simple fracture to produce disastrous results years after the reception of the injury; for these apparently simple fissures may be attended by grave intra-cranial conditions. No man can say that a fracture of the skull, however simple it may appear, will not be followed by meningeal hæmorrhage, or later by epilepsy, insanity, etc. A case which I saw some years ago in consultation with Dr. L. A Berger, of this city forcibly illustrates this point:

Case 1.—C. L.———, of German birth, age fifty-three, a furrier, of powerful build; was quiet, reserved, and modest in demeanor; not a drinking man; family history good. During the Franco-Prussian war (about 1870) he was struck with the butt of a musket (shown by scar over right parietal eminence and anteriorly). There was no apparent injury to skull, no fracture according to history of case, though he was unconscious for two or three days after time of injury; he went again into active service three weeks after receiving the blow. From 1871 to 1881, (when he came to America and married) his history is a blank. Since his marriage he had developed a peculiar condition; he is subject to attacks of vertigo, is seized with most violent fits of anger (from most trivial causes), often lasting two hours and terminating in an melancholic state continuing a day or two. During his last year of life he has been alternately morose, secretive, melancholic and negligent in his business, and extremely restless. On October 18, (1886) he became unusually restless; ran out of house and remained in country all day, walking; returned in evening completely exhausted and unable to account for his disappearance or whereabouts. October 20, no particular change except tendency to talk incessantly; pupils normal; no deviation on protrusion of tongue; no tremor or paralysis; physical functions unimpaired; temperature normal; sleep little and disturbed. He was given bromides and tonics. During next thirty days there was no perceptible change except that gradually a condition like dementia supervened. November 22, he became suddenly unconscious, stertorous breathing, pupils dilated, inability to swallow, pulse 120, temperature 100°. During day breathing assumed Cheyne-Stokes character and death occured twelve hours after onset of coma. *Autopsy.*—Post-mortem examination was made eighteen hours after death; present Drs. Berger, Eggers, Adams and Lanphear. Calvaria removed with difficulty, dura mater adherent; cloudy exudate beneath dura, at site of injury; also in pia. Dura thickened, opaque and inseparable from arachnoid from point of injury up to longitudinal sinus; here was a small piece of bone driven across longitudinal fissure and penetrating the falx cerebri; size of fragment, one inch long and one-sixth inch wide; no effusion or hæmorrhage in brain or ventricles; no other lesions discoverable upon most careful examination.

Here was a case of injury to the skull, with no fracture discoverable at time of accident; yet insanity resulted two years later and death from pachymeningitis sixteen years afterward. It is not improbable that if trephining had been done at time of injury no subsequent trouble would have occurred. The history of this case emphasizes the point I shall presently make, that all cases of local injury to the skull, accompanied by unconsciousness of more than an hour's duration should be trephined.

Another case in which there was no evidence of fracture at time of reception of injury—save prolonged unconsciousness—yet one in which trephining would probably have prevented development of mental trouble, was the following (noticed in the *Kansas City Medical Index*, August 1888):

Case II.—Isaac F———, age forty-one, laborer, family history unknown, previous health excellent, was in September 1887, struck upon the head by falling timbers. The external injury was not great, but he

was comatose for a time, and the attending surgeon, Dr. N. J. Pettijohn, of Kansas City, desired to trephine near the site of the injury; the consulting surgeons, however, demurred because the symptoms present were not of an alarming character, and he showed evidence of rallying. He eventually recovered consciousness, and was restored to fair physical health; but his mental condition is one of serious aspect. He was for some weeks recently under my care, with the object of determining, if possible, the justifiability of trephining now, and the point of selection for operation. I was unable to decide that there is *now* any local point of excitation (the only peripheral symptoms being a tingling and numbness of one little finger)—in other words, there seems to be evidence of general periencephalitis (chronic), and as there was absolutely no improvement under proper treatment, I had him committed to the state lunatic asylum, where he will probably pass the remainder of his days.

Such cases as these are not rare and they are not without their lesson. They teach that in *all cases* where there is even a *suspicion* that there is depression of the internal table the trephine should be employed, notwithstanding the old rule we have been wont to follow. I have used the word "suspicion" advisedly; we cannot, in many instances, be certain that there is a fracture until we cut down to see. As Moulin (*Practice of Surgery*, page 601) says: "Contusions, fissures and fractures do not always admit of proof; and even when the bone is comminuted and the depression considerable, the diagnosis is often a conjecture, owing to the amount of blood extravasated. The gravity of simple fractures arises from the fact that serious injury to important structures is so often associated with them. That I am correct in my assertion that we are justified in trephining even upon a *suspicion* of fracture is proven by the following case:

Case III.—Tod K——, age thirteen years, fell from the bluff, a distance of 65 feet, striking upon his head. The accident occurred about 11 a. m. May 16, 1891. He was not unconscious when conveyed to his home and a physician pronounced his wound not a serious one, washed the lacerated scalp and applied an antiseptic dressing. At 1 p. m. the boy became somewhat drowsy and vomited repeatedly, at which time I was called to take charge of the case. He was quite stupid, pulse very weak, skin of a purple color, "shock" pronounced. Examination showed a cut in scalp about two inches long on the left median line, just behind the parietal eminence; but no special indication of fracture. At 3 p. m., assisted by Dr. John Wilson, I shaved the scalp and enlarged the skin-cut, under chloroform anæsthesia. When the scalp was turned back an extensive fracture of the parietal bone was revealed, with depression two inches or more across. This fracture had been hidden by the scalp's slipping over it entirely and by the boggy swelling of the injured soft parts. A small opening was chiseled in the external plate and an elevator introduced; but the depressed bone could not be raised thus, so a ¾ inch trephine was applied. On removal of the button a very considerable amount of blood came from between the bone and the dura. A large spicula of the vitreous plate projected through the dura and into the brain tissue; this was removed, together with a number of fragments. There was considerable bulging of the brain through the opening and the protruded matter was pulseless. Upon raising the depressed bone into proper position the brain sank and soon pulsation returned and simultaneously the purple hue of the skin gradually disappeared. All clots and fragments having been removed the wound was irrigated with hot water (previously boiled), the wound in the dura closed by a fine catgut suture, a strip of bi-chloride gauze placed next to the dura and projecting through scalp-wound for drainage and the cut in scalp sewed with catgut. The usual dressings were applied and patient put to bed in good condition, color and pulse greatly improved.

At 10-30 p. m. temperature normal, no pain, patient bright and cheerful and talking as if nothing had occurred. Morphine, gr. ⅛, *per orem*, if needed for sleep, was ordered.

May 17th. At 3 p. m. in fine shape—pulse 90, temperature 99.° No pain; free motion in all extremities.

May 18th. Sat up while drainage was removed and dressings applied; no fever; no pain; wound in fine shape, no pus, healing nicely begun. Dressed with iodoform, bi-chloride gauze, cotton and bandage.

May 19th. Condition excellent—no pain; no fever; eats and sleeps well.

May 26th. Dressed head; wound practically well.

May 31st. Patient running about over house. Wound entirely healed. Discharged well.

What the result would have been in this case if the so-called "conservative treatment" of the first doctor had been continued can, of course, be only a matter of conjecture. But I feel sure that if death had not occurred within a day or two, an inflammatory process would have occurred which would have necessitated operation a week or two later when there would have been far more danger; or, if this had fortunately been escaped, an epilepsy would probably have arisen in later years. The objection of Brodie which strange to say, is supported by Ashhurst, (*Principles and Practice of Surgery*, 1889, page 339) that it is better to leave imbedded in the brain, a foreign body or fragment of bone rather than use any force in its removal, is one that can not be too strongly condemned. If the surgeon be *absolutely clean*—i. e., surgically clean—he is not going to do much mischief provided he is reasonably careful. Ashhurst's assertion that meningitis and encephalitis are likely to occur from surgical handling is as utterly false as many other fallacies of ancient pathology; an experience in a large number of cases of operative brain surgery has lead me to know that inflammation is an accident due to infection prior to operation, or to carelessness on the part of the surgeon. A clean wound of the brain or of the meninges will heal without the least sign of inflammation, just as will one in the broad ligament and abdominal walls. Inflammation is not necessary to healing and should not be found in any wound made by a surgeon. As Senn says (*Principles of Surgery*, page 1): "Studied from a surgical standpoint, regeneration includes the process observed in the healing of wounds and the complete or partial restoration of parts damaged. * * * Regeneration and inflammation are distinct conditions, which should no longer be confounded or considered from the same etiological and pathological standpoint. An ideal regeneration takes place without inflammation provided the seat of injury or tissue destruction remains aseptic; that is, free from pathogenic organisms."

We being, then, able to open up the scalp freely, or the skull also, without additional danger, I am not sure but Agnew is correct in asserting that we would be justified in operating in even simple fissure; we certainly ought to do so in every suspicious case. On the other hand, no case, unless the patient is seen to be dying, should be considered too grave for operation. An illustrative case is this:

Case IV.—George E.——, aged twenty-four, was struck by a locomotive on the morning of April 2, 1891. During the day he was seen by at least three prominent surgeons who said that recovery was impossible and all refused to risk an operation. I saw him in consultation with Dr. W. S. Allen, at 6 p. m. At that time he was partially conscious and begged me to do something to give him even a slight chance of recovery. His appearance was frightful; the whole scalp and periosteum was torn away, i. e., the scalp at the margin of the hair was broken loose and hung by a piece not more than three inches wide at the back of the neck; the flange of the drive-wheel had struck him near the coronal suture on the right side, driving the bone down into and fearfully injuring the right frontal convolutions; a fracture extended downward into the orbit, widely gaping and blood still oozing from eye and nose. This was a "diffuse injury" to the skull in which the books direct not to operate. Nevertheless he was chloroformed by Dr. Callaghan and we removed the cinders, broken bones and clots, raised the depressed bone, pushed together the bones which were separated by the long fracture from junction of saggital and lambdoidal sutures to point of crushing, and into orbit, and put in large drainage tubes, replacing scalp and holding it in place by continuous catgut suture.

April 3d. Slept nicely all night; no nausea, no fever (99+), no paralysis, but considerable frontal headache.

April 5th. Drainage removed. Patient doing well.

April 17th. Patient has made an uninterrupted recovery. Discharged from hospital well, though still weak.

In view of such an ideal result can anyone say that any case is too severe to justify an attempt to save life? Yet there are surgeons of eminence who refuse to jeopardize their reputation by operating in such cases. As for me, I believe one

patient's life better than any reputation I can ever acquire as a surgeon.

To summarize the whole matter I offer the following:

RULES FOR TREPHINING IN INJURY OF THE SKULL.

1. All cases of depressed fracture, either simple or compound, require trephining and elevation, whether there be pressure symptoms or not.

2. All punctured fractures and gunshot wounds imperatively indicate the use of the trephine.

In simple fracture of the skull where any symptoms of brain trouble persist exploratory operation should be done.

4. In all cases of local injury to the skull, whether fracture or bruise, followed by evidence of inflammation of bone or persistent symptoms of brain irritation, or of pus between the bone and dura, the trephine should be resorted to.

5. In every case of localized injury to the head where unconsciousness persists for more than an hour, exploratory operation, including opening the skull if necessary, should be done.

6. The appearance of stupor some hours after a head injury indicates meningeal hæmorrhage and requires trephining at the point of injury if known, or at point indicated by cerebral localization; the middle meningeal being the usual source of trouble.

7. Even in very extensive injury to the head, operation should be made, since removal of *dèbris*, restoration of normal contour and cleaning of injured tissues can add but little to the danger and may save life.

8. In every case of doubt exploratory operation is justifiable.

9. Compound fractures, with or without apparent depression, demand enlargement of the wound and careful exploration.

COLD IN THE HEAD.

For cold in the head while in the acute congestive stage, there is no better remedy than gelsemium. One good large dose, say ten minims of the fluid extract, taken upon going to bed will effectually dispose of this troublesome and uncomfortable affection. One dose is usually sufficient.

PRURITUS ANI.

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No local affection is more annoying and troublesome to a patient than this disease, and often the physician will be put to his "wit's end" to find means of relief. This disease is characterized by an intense, itching, burning and lancinating pain, in and around the anus, the pain often coming on in paroxysms, usually being much worse at night, after the patient has retired. The affection often extends to the surrounding tissues, the germs multiplying rapidly and burrowing in different directions, irritating the sensitive nerves, causing most intense itching. In a large number of cases, we find associated with it fistula in ano—hæmorrhoids, irritable fissure and small ulcers, each adding to the misery of the patient. A patient suffering from this trouble usually exhausts all local means he knows or ever heard of. He refrains from consulting a physician as long as he can, consequently he has become nervous, emaciated, and I may say, almost skeptical, as regards getting well.

The treatment of this trouble is varied, every physician having his own formula, besides every case must be treated on its own merits from the conditions presented. That which I have found most successful in a considerable number of cases, is as follows: When patient comes to consult me, I endeavor to get his confidence and instill him with hope, the bowels are freely opened with a saline purge, or calomel, and he is directed to report for a thorough examination, when such complications as fistula, hæmorrhoids, fissure, etc., are carefully sought for. Of course when any of these are found, they each call for their respective treatment. In a simple case of pruritis ani I order an injection of a solution of the following, which I have found to be a good antiseptic and local stimulant:

℞ Listerine ..... ℥iv
Glycerine ..... ℥vi
Acid Carbol..... gttxx
Aqua..... ad ℥vi
M. Sig. ℥ss injected in rectum once daily.

It is necessary to medicate the internal sphincter and rectum in all cases of pruritis as there is more or less irritation of these parts. I also use the different ointments and antiseptic solutions, with good results in some cases and none in others.

Lately I have employed tincture of iodine. Before using, however, I direct the patient to have the bowels thoroughly moved, and an injection of warm soap and water to be taken, the external parts to be washed and dried. Then I apply the iodine thoroughly to the diseased surface, if it is too severe, a small amount of tr. opii can be added, or the parts may be covered by vaseline protected by absorbent cotton.

After having made from four to six applications, I begin to find my patient rapidly improving, or nearly recovered. I direct him to keep the parts clean, use the injection once daily, keep the bowels open, take plenty of outdoor exercise and eat good, nutritious food. Complications, if present, must be treated according to the regular surgical methods.

VINUM IPECACUANHÆ IN WEAK LABOR PAINS.

Stillmark (*St. Petersburger medicinische Wochenschrift*, No, 18, 1892,) contributes the notes of a case of uterine inertia in which the contractions was re-established by the administration of wine of ipecac. The patient was a IV-para, with a history of easy previous labors. Three weeks before the presumptive termination of her labor the membranes spontaneously ruptured and one or two weak pains were experienced. The next morning Stillmark examined her and found head presenting in second position, os admitting two or three fingers. There were no pains. The patient was placed in a bath. Nine hours later, as the pains had not yet occurred, warm vaginal douches were applied without result. During the following night patient slept. Next morning, after a bath, warm vaginal irrigations were again used, with gentle massage to the uterus. As all this failed to establish the pains, wine of ipecac was administered in a 15-drop dose. Half-an-hour afterward the patent exclaimed that her abdomen felt hard. At 1.30 P.M., 15 drops were again administered. In three-quarters of an hour, after the second dose, strong normal pains began. In the evening the pains were weaker, and about ten o'clock had almost ceased. Five drops were now given, as vomiting had occurred after the second dose. Energetic labor pains were soon established and at 12 o'clock the child was delivered. The placenta soon followed. —*University Med. Magazine.*

LACQUER POISONING AND NOTES.

By ALICE MAC LEAN ROSS, M. D.,

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The *Rhus Vernicifera* or varnish tree as it is popularly called, grows upon every hillside in this vicinity. In Japan and North China it attains the dimensions of a good sized tree reaching twenty feet or thereabouts in height, but here it is stunted and is not tapped for its sap. Its poisonous properties are well known and it is consequently shunned by both natives and foreigners, and most cases of poisoning are caused by contact with freshly varnished lacquer ware or bric-a-brac.

The juice is a resinous substance of tawny or dark brown color when fresh, turning jet black upon exposure to the light. Its characteristic properties are imparted to it by urushic acid, an irritant poison and a peculiar albuminoid which causes it to become externally hard on exposure to the air. The process of hardening takes place much more rapidiy in the presence of moisture, and in the process of manufacture, freshly lacquered articles are covered with wet matting to hasten the process of drying. The trees are cultivated in vast groves, and cuts are made in the bark from which the juice exudes and is gathered. Twenty pounds from one thousand trees is considered a good yield for one night. When applied as a varnish it is mixed with various substances, as pig's gall, vinegar and coloring matter known to certain guilds and clans, and its peculiar property is its hardness. It resists all known solvents and when old will stand almost any amount of violence without scratching or marring.

The susceptibility of different persons to the poisonous qualities of the lacquer varies greatly. Some enjoy perfect immunity, while others cannot enter a room where a freshly lacquered piece of furniture is standing, or pass a clump of varnish trees without experiencing headache, fullness of the head or vertigo. A tolerance can be acquired for it as seen by those who work with it and gather it, although the latter usually cover up face and hands while at work.

Contact of the varnish with the skin causes an eruption similar to that of *Rhus Toxicodendron*, and identical with that of cashew nut. Minute vesicles first appear situated upon a red and inflamed base. They are generally packed closely together and are accompanied by intense itching and burning and a good deal of pain. In from ten to twenty-four hours the deeper tissues swell to a considerable degree, closing the eyes if the face be affected, or rendering a hand useless. The vesicles coalesce forming good sized bullæ, and in about ten days, which is the usual course of the disease, dry down. The skin pulls off, the swelling disappears and no trace of the disorder is left behind.

In the matter of treatment the native Chinese doctors apply a lotion of cinnabar, a favorite application in all skin diseases. This it is needless to say does little good. Carbolized oil is very good, applied over the affected parts, and a carbolized emulsion of either sweet oil or peanut oil with lime water is excellent. In the last case which I saw, stupes of boric acid were applied and the part was bathed or immersed in hot solution of boric acid. This gave more relief than anything else. I regret not having grindelia orbusta in stock as that is said to be a specific in *Rhus Toxicodendron* poisoning. The similarity of the eruption and the close alliance of the species would warrant a trial.

My attention was called some time ago by Dr. Walter J. Cree, of Detroit, to a certain relation existing between complexion and laceration of the perineum and cracked nipples. My observations entirely coincide with his, and I am curious to know if others have observed the same thing. In red-haired women and those brunettes who have red lips, red cheeks, and are inclined to freckle rather than to tan, lacerated perineum and cracked nipples occur most frequently. And in those sallow skinned blondes who tan rather that freckle and who have a tendency to a deposit of pigment in the areola of the nipple, about the neck and armpits are least liable to suffer from these accidents. The first class seem to have friable tissues and thin skin, and the second, tough muscles and thick skin. Other women are liable to suffer or are able to resist as they lean toward one type or the other. This relation is to me marked, and is of value in prophylaxis.

Coffee as a beverage is an agent of considerable potency in drying up the milk of nursing women. In an institution of which I had charge recently in which there were some thirty or so nursing women, coffee was served twice a week. Regularly upon these days the nurses in charge reported a scarcity of breast-milk and there was frequently a necessity for resorting to artificial feeding to eke out. There is every reason why coffee should be an excellent agent in reducing the flow of milk, for caffeine is one of the best known duretics. I have not been able to ascertain the exact mode of action, and whether it is by reducing the amount of fluid in body through the kidneys I do not know, but it seems to have this effect in a marked degree, and is a valuable adjunct to other agents in reducing excessive flow of milk. In the lying-in period, and at the time of weaning, when the breasts secrete more milk than is wanted, and when the mother is abstaining from fluids, her thirst might be quenched with coffee (providing it does not interfere with her sleep), with good result.

Whooping cough is called the "hundred day disease" in Japan.

THE TREATMENT OF ABORTION.

When abortion is threatened, D. W. W. Seymour (*Am. Gyn. Journal,*) keeps the patient in bed, gives full doses of opium, and if necessary fluid extract of black haw. In the early stages this usually suffices. To control the hæmorrhage he uses a tampon of iodoform gauze, as it can be left in place longer without danger than any other material; however it is never allowed to remain longer than twenty-four hours. When abortion becomes inevitable he cleans out the uterus thoroughly. He precedes examination by a thorough antiseptic douche of the external parts as well as the vagina. If necessary he dilates the uterus with a mechanical dilator, never with tents, introduces a Martin's curette or a polypus forceps and removes its contents thoroughly. The success of his treatment is demonstrated by his record of one hundred and fifty cases, in which there was no death and no septic condition developed after the operation.—*Western Med. Rep.*, *Canada Lancet.*

A NEW TREATMENT OF PROSTATIC HYPERTROPHY.*

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PHILADELPHIA.

A proper presentation of the subject of the electrical treatment of prostatic inflammation and hypertrophy is divisible into several general propositions and statements. The first and most important statement that I wish to impress upon you is that the methods about to be advocated may be relied upon as a successful mode of dealing with most cases of this troublesome affections. No method is worth the words to describe it unless this is more or less true, yet in this instance the claim of efficiency is specially noteworthy as the affection under consideration is generally regarded as incurable, and condemning its victims to merely mitigated misery for the balance of their days.

The second proposition may be put in the form of the question: Why and how does electricity cure these cases when properly applied? To answer this we must consider the nature of the morbid process and the character of the tissue involved, and apply to these facts the therapeutic deduction derived from the action of electricity in other analogous structures and affections. The prostate gland is a musculo-glandular body, the glandular tissue forming the bulk of its stroma, through which a multitude of muscular fibrils lace and interlace. The glandular tissue is in direct communication by continuity of structure with the glandular lining of the prostatic urethra. The affection under consideration—acute prostatitis and its sequelæ—does not differ essentially from such catarrhal affections as endometritis, rhinitis and other subacute inflammations of glandular mucous membranes; and most probably is caused or accompanied by the same microbic manifestations as those affections. The utility of the direct application of the galvanic current in combating the disease would therefore suggest itself to any one who has observed its value in endometritis. Of the suggestions to be derived from a parallel treatment of rhinitis I shall not speak beyond mention of a series of experiments now being conducted by the speaker which already prove that nasal catarrh is a field of vast importance to the electro-peutist. Mildly cauterant of morbid surfaces and stimulant to the tissue changes of the whole organ, the direct application of the galvanic current to the prostatic urethra is quickly beneficial in changing the character of the morbid process in the glandular tissue. In addition to this resolvent action, another element of remedial power lies in the contractile effect of swelling currents on the muscular fibres so liberally supplied to the organ. It is the development of this constringent power of electric currents in the hypertrophied gland that forms the chief feature of my method, and as it is a most important feature in certain cases I have felt amply justified in designating the method a new treatment, without detriment to the credit due among others, to one of the fellows of this society, Dr. Robert Newman, who has done so much to attract attention to the value of electricity in prostatic disorders. I have seen little or no mention of the prostate as a muscular organ, and a recognition of this important fact is, in my opinion, the keynote to the most successful management of prostatic hypertrophy.

This catarrhal inflammation and hypertrophy are manifested in an organ closely analogous to the uterus, and in its several varieties and consequences, such as hyperplasia proper, true fibrosis, and myo-fibromatous neoplasms. We have almost exactly analogous affections with those occuring in that organ. This being so, it merely follows that the curative treatment must also be analogous. Currents of five and eighteen milliamperes, while useful in combatting the more superficial prostatitis will not cure the hypertrophies. As in fibroids of the uterus, we must bring the hypertrophied and degenerated organ under the influence of from 20 to 70 ma. This I have done frequently, the active pole, negative, being within the prostatic urethra, and the indefferent pad on the back. The only precautions used, in addition to scrupulous cleanliness of the electrode and gentleness of its insertion, being that the current was not permitted to remain at its strongest figure more than a few seconds, as it was turned on and off at the controller to get the greatest constringing action with the least electrolytic irritation. If this be repeated not oftener than five days no irritation will re-

*Read before the American Electro-Therapeutic Association, October 4th, 1892.

sult, but rather a feeling of relief. In the intervals the same current strength is applied daily in the same manner through the rectal wall, the active electrode being an olive of proper size inserted into the rectum and pressed against the prostate, while the indifferent pad is on the abdomen. The primary faradic current should be used after the same method at each sitting, and I am inclined to look on it is an important adjuvant.

Under this treatment the shrinkage of the organ as a whole is soon manifest to the rectal touch, and as soon as a sufficient absorption of morbid products has occurred, with regression of interfering nodules and collars, the power and freedom of micturition will return.

During the progress of the curative treatment the catheter is passed as often as required, the instrument used for treatment serving the purpose of a catheter also at that sitting. Antiseptic flushing of the bladder is also not neglected at such intervals as the condition of the bladder demands.

A point of additional importance in the use of swelling currents of both varieties in prostatic disease is the fact that the expulsive power of the bladder is always below par in these troubles, sometimes overshadowing the condition of the gland itself, and for this condition the treatment described is of great value.

The effect of this treatment is greatest in the symmetrical enlargements of the gland, as it is in this variety that the muscular substance is capable of greatest response. In fibroid nodules in one lobe of the prostate the older method of continuous application is possibly the best, or we may resort to electro-puncture, though this last resort is undesirable on account of the difficulty of maintaining asepsis.

The instrument shown you is made from a silver catheter with large curve, which has been insulated everywhere with fused hard rubber except a bare surface about two centimeters long just back of the eye. Besides having the advantage of serving as a catheter, and thus saving double instrumentation, the eye at the end serves to notify us of the exact position of the bare spot previous to turning the current on. One of the chief advantages of this form of electrode is the ease with which it may be asepticised by heating in the flame of an alcohol lamp, the same heating permitting us also to repair any break that may have occurred in the thin hard rubber coating of the instrument.

212 S. 15th St.

THE VALUE OF RESORCIN IN GASTRIC ULCERS.

In the *Provincial Medical Journal* for May 2, 1892, Pope, of Leicester, records the results which he has obtained in the treatment of gastric ulcer by means of resorcin, referring to a paper by Dr. Mackey, of Brighton, which was published in the *Lancet*, vol. i. p. 570, who treated fifteen cases by this method, using 5 grains three times a day. In Mackey's cases it proved very valuable in fourteen. Its employment is based upon the fact that it is antiseptic, analgesic,and hæmostatic. Pope believes that its analgesic property is most valuable, as by this means the stomach is able to tolerate food, when otherwise it would be excessively sensitive, ulcerated or eroded. The antiseptic effect which it produces is valuable in the prevention of fermentation.

The ordinary dose is 5 grains three times a day. Pope also states that he has found resorcin of value in gastric cancer. Under its use he has seen foul tongues become clean, and stomachs which formerly rejected almost all food become tolerant. Under these circumstances, however, it is a drug which modifies the symptoms rather than the disease itself.

THE TREATMENT OF ASTHMA.

Dieulafoy (*L' Union Mèdicale*, No. 48), says: At the onset of a paroxysm by means of a brush an application of a 5 per cent. solution cocaine hydrochlorate is made to the nasal fossæ as high as possible, or the throat may for four or five minutes be sprayed with the same solution. Should the attack not be aborted, from six to twelve drops of pyridine on a handkerchief should be inhaled. If the attack has reached its acme, a twelfth grain of morphine hydrochlorate is administered hypodermatically, if necessary repeated at an interval of a quarter of an hour. For the constitutional condition, potassium iodide, belladonna, and arsenic are indicated In case of emphysema, baths of compressed air should be employed.—*Medical News.*

REMOVAL OF FRAGMENT OF BONE FROM ŒSOPHAGUS THROUGH THE PHARYNX.

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Last month I was called to attend a married woman, aged 50, who said that at breakfast four hours before, she had tried to swallow a piece of meat which had lodged in her throat. The patient had drunk beer with the hope that it would nauseate her—according to her own statement. Other members of the household informed me, however, that she was in the habit of drinking considerable, though she was not positively intemperate. She was in a nervous, almost hysterical state with the feeling of something lodged in the throat at about the level of the greater cornua of the hyoid. A laryngoscopic examination showed that the throat was clear but that there was some chronic pharyngitis, that the tonsils were enlarged and that there were masses of tonsillar tissue on either side of the base of the tongue which might have acted as irritants and which, I was inclined to think, were the cause of the symptoms of which the patient complained since she was certain that she had swallowed no hard substance and that there was no bone in the meat of which she ate at breakfast. Accordingly, after prescribing an astringent gargle and administering a gram dose of potassium bromide, I was about to leave the house when the symptoms became aggrated, the patient gagging and breathing with difficulty. A digital examination of the pharynx and œsophagus was then made, the patient having the least irritable throat which I have ever encountered. The epiglottos, rima glottis, arytenoid cartilages, tonsils and other parts of the throat were carefully explored and then the finger was passed into the œsophagus as far as it would reach and it just touched the upper part of some foreign body. An attempt to remove the obstacle with long curved forceps failed. The patient was then placed face downward on a bed with the head hanging over the edge. Partly by the aid of my finger in the throat, partly by the patient's efforts at vomiting, the foreign body was removed. Notwithstanding the patient's previous statement, it proved to be a fragment of a pork rib, one inch long, three eighths wide, rounded at one end, sharp at the other. No unpleasant after-effects were noted.

CALOMEL IN HÆMORRHOIDS.

For a number of years Dr. J. B. James, of London, has treated hæmorrhoids by the simple process of applying calomel to them with the finger, and claims to have done so with marked success in every case, particularly when the hæmorrhoidal mass was inflamed, which is characterized by mucus discharge and hæmorrhage, accompanied by a painful sensation of weight in the region of the rectum. All these symptoms, it is alleged, were speedily relieved by the simple application of the calomel, which had the still more important subsequent advantage of restoring the patient to perfect ease, enabling him to pursue his usual occupation in happy immunity from all distressing or annoying symptoms.—*Merck's Bulletin*, May, 1892, p. 277.

BORATE OF SODA IN EPILEPSY.

Dr. Mairet finds that compared with the bromide of potassium, the borate of soda is of real value in the treatment of epilepsy. The attacks decrease under its use, and may be suppressed even for many months at a time. It acts better than the bromide of potash in symptomatic epilepsy. The bromide, on the contrary, gives better results than the borate of soda in nervous epilepsies, and in cases of this order it is only when the bromide has failed that borax should be tried.—*Le Progrès Médical.*

PRURITUS ANI.

Dr. Balfour (*Norsk Magazin for Lægevidenskaben*, No. 1, 1892) employs the following formula with success in pruritis ani:

℞ Calomel.....gms. 5.
Vaseline.....gms. 35.

Instead of vaseline one may use lanoline, which of itself acts well in pruritus.

Society Reports.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Meeting of September 1st, 1892.

The President, Dr. W. H. H. Githens, in the chair.

Dr. Joseph Price presented a paper on "Section for Removal of Tumors Following the use of Electricity." The doctor said that, with our abundant and continually increasing data, we are growing in ability to discuss the question of the value of electro-therapeutics in gynecology with more intelligence. Just where the claims of the electricians are to stop is problematic. The utter failure of many of their claims does not seem to embarrass them. We are led to believe that there is no abdominal or pelvic trouble that the galvanic current is unable to cure. The method of treatment, the operative work, of none of us is uniformly successful, but our surgeons in their work have results that speak for themselves—while in the electric treatment, the failures are repeated and signal. To start with, the treatment is troublesome and tedious, much more so than surgical operation, and it delays, prolongs and generally complicates, where prompt surgical procedure expedites and saves. Up to date, the advocates of the electrical treatment have not furnished a single instance in which the tumor has disappeared, where the disappearance could positively, beyond reasonable doubt, be credited to electric treatment. At the meeting of the American Gynecological Society, held in New York in September 1887, Dr. Apostoli was asked the pointed question: "Have you ever seen a tumor disappear under your treatment?" His answer was manly and frank, "I have not." All he could claim, all he did claim, was amelioration of symptoms. Opium will ameliorate symptoms and at the same time have a like effect with electricity in complicating the trouble. In tumors the claim is "reduction in size." The surgeon's claim is total extirpation, and restoration to health and usefulness. Another claim is "greatly benefited." This could be done by careful general treatment, keeping the bowels open, rest, particularly at the periods.

An eminent English gynecologist says, "The changes following galvano-puncture will be found immediately around the seat of puncture, but similar changes would follow if the thermo-cautery or red-hot iron had been used. In any case the changes are extremely local and do not extend into the substance of the tumor. In some cases the current has no effect whatever on the tumor. In other cases it causes sloughing. This was followed sometimes by absorption of the tumor and sometimes not. In either case the patient was subjected to all the danger of peritonitis, septicæmia, thrombosis, embolism, etc."

An electrician claims that in the treatment of extra-uterine gestation, "it stands with a record unblemished by a single failure or any dangerous consequences." Now, on the subject of extra-uterine pregnancy, Mr. Tait, with the characteristic bluntness of the surgeon, says, "To apply the electric current to every kind of a lump in the pelvis under the suspicion that it is an extra-uterine pregnancy, would be a most haphazard, dangerous proceeding, worthy of the strongest condemnation." He "considered the use of the electric-current as one of the most nonsensical proposals that had ever been suggested to a surgical audience." He said that it was absurd to attribute the maceration of the fœtus to the electric current. When rupture took place, he often found a macerated fœtus, with bones extensively laid bare. In that case the fœtus must have been dead for weeks before the current was applied. And as to the growth of the placenta, the cases he had seen were those in which he had found a macerated fœtus not more than ten or twelve weeks old, while the placenta was the size of a four months' pregnancy. This opinion was confirmed by Dr. Berry Hart and Mr. Knowlsley Thornton.

As to the diagnostic properties and functions of electricity, there is solid ground for our scepticism. Operators with a varied and extended surgical experience and with a clinical knowledge of the multiple nature of pelvic and abdominal disease, have a right to question the ability of the great majority of the followers of the electric treatment to diagnose pelvic and abdominal disease within defined lines of reasonable certainty.

DISCUSSION.

Dr. G. Betton Massey said that as he did not hear the first part of the paper, he wanted to say that his remarks are to be taken in ignorance of the first half of the paper. The paper clearly shows that Dr. Price is opposed to electricity in gynecology. He preferred to see cases from a surgeon who takes that stand, for he had been so unfortunate as to have had some cases from surgeons who believe everything is good and that they are good for everything and that they had as good ability to apply the delicate and powerful agent electricity for the cure of bleeding and large tumors as they had to cut the tumor out with a knife.

The portion of the paper that he heard was simply an attempt to hold up to derision, the claims made for electricity in the cure of fibroids and also the explanation of those claims; but so far as he could see it the derision was merely in the sense that you choose to take it. The claims which were held up to derision, he wished to stand by and point out as true in skilled hands. A man can not get up and say that there is nothing in electricity unless he can tell the difference between the effect of the positive and the negative pole properly applied. He shows that he is ignorant of the first principles unless he can discuss them.

It is folly for any one to compare the removal of the ovaries in fibroid cases with the administration of electricity. The one has been demonstrated by those who have mastered the subject as almost invariably valuable—that is, nearly one hundred per cent. of the cases are benefited more or less. The other, the removal of the ovaries is a pure experiment. Who can say of any given case, that it will be better at the menopause? Hence, who can say that after the removal, the dangerous removal, of these inoffending organs the patient will be better. He knew himself from considerable experience that oophorectomy for fibroids is largely an unnecessary experiment and largely a failure.

And as to the electrical treatment: should any one wish to know about that they should not stop at the opinions of an opponent. He had treated sixty-eight cases of fibroid tumors with electricity, some not well adapted to that agent, as it is now well conceded that there are certain tumors that are not well adapted to the use of electricity. Of these sixty-eight cases, sixty-four were decidedly benefited in spite of the fact that many of them were treated before the time had arrived when he knew how to select these cases. Sixty-four cases were satisfied not to undergo any further treatment, and were satisfied as to the money and time spent. From the point of view of the arrest of the growth, he believed from his present information of these sixty-four cases, that the growth has been permanently arrested. They are therefore successes in that point of view. They have all been successes from the point of view of the removal of pain and pressure symptoms. They were nearly all successes from the point of view of reduction in size, many of them being largely reduced, although he warned them that such good results can only be gotten by patient work.

In these sixty-four cases, the tumor totally disappeared in seven. In one the tumor was as large as his head. That case has been thoroughly spoken of and reported in another society. In view of that statement it seems folly for any sensible man to say that the electrical treatment of fibroid tumors is unwise and is useless. He was prepared to exhibit that patient to any one who wishes to see her and also to furnish the measurements taken by her physician when she was first placed under his treatment.

Dr. B. F. Baer believed that we want the truth in regard to electricity in the treatment of fibroid tumors and its effect on subsequent surgical treatment. In his own experience he had found that the most difficult cases of fibroids that he had operated on had been cases that had previously been treated by electricity. He did not wish to state that the electric treatment was the cause of the case being the more difficult, because he could not prove it, but that not only did electricity fail to cure these tumors, but, for some reason during the conduct of the treatment, these patients had from one to a dozen attacks of peritonitis around the tumor. The growths were universally adherent. One sloughed and one contained a large quantity of pus and three had evidence of inspissated pus around the tumor. In no single case treated by electricity had he seen more than temporary benefit result. He thought that Dr. Massey had no right to claim that the patient was benefited by

electricity and would not have been benefited by the remedies which long ago we learned would benefit these cases, such as the application of some stimulus, as of iodine, or the curette, safely and mildly applied. These agents we used long before electricity was employed or hysterectomies done. We benefited these cases. We modified the hæmorrhage and in some cases thought that we cured the hæmorrhage by remedies applied to the interior of the womb. With the curette we did harm in many cases, but we controlled the hæmorrhage. We did the same with ergot, chloride of ammonia, rest, clay-pads.

After his last year's experience, he would use surgery instead of electricity. If any friend of his requested treatment, he should emphatically urge surgery even in small tumors.

In regard to what Dr. Massey said with reference to oophorectomy. This does not give the good results he once thought that it did, or hoped that it would. In his own experience oophorectomy for fibroid tumors had not been a successful operation. He could not see why he should use oophorectomy when hysterectomy is so easy. He should feel that the patient was safer after hysterectomy than after the ovaries were removed.

Dr. Joseph Hoffman said that in the treatment of fibroid tumors by electricity it will always be a question as to what the electricians mean by a fibroid. He thought Skene Keith quite as good an authority on electricity and its application to fibroids as other gentlemen who claim as much he does. Dr. Hoffman did not believe that there were five consecutive cases in the last book that Dr. Keith has written that would be accepted by the surgeon as cures of fibroid tumors such as Dr. Price exhibited. At one of the last meetings of the Society, Dr. Massey had reported a case of tumor diminished by the use of electricity—a one-sided tumor the nature of which was puzzling. But, to everyone in the society except the electrician, it was clearly a fæcal mass in a distended colon. If, in a case like this, there is doubt in the electrician's mind as to what he is treating, is there not good reason for doubt in the mind of the surgeon that some of these cases, regarded as fibroids, are something else ?

Then again about time. Time is in many cases an important element. It is an important element not only to the electrician but to the woman and to the surgeon and Dr. Hoffman held that if a radical cure can be demonstrated as possible in the great majority of these cases, operation is from the point of time preferable, since the mortality comes down to almost nil.

Another point, the desire to do hysterectomy and the frequency with which it is done. If the two books, the one by the elder Keith and that by the younger Keith, are compared, no one in his senses can challenge their relative importance. The one is an earnest, successful, scientific work, the other is tentatively trying experiments. The one gives results, the other asserts that he gets results but there is nothing in the way of proof. Remember that the surgeon does not do a hysterectomy in every case.—The argument seems to be that every case that presents itself to the electrician has just escaped the surgeon by the skin of its teeth. Such is not the fact. He had walked by the side of Dr. Price when he did not do hysterectomy. It was a scientific point to be settled and the result has been one of weighing the chances, considering the nature of the tumors and the condition of the patient—the weighing of the power of electricity to do mischief or to afford benefit.

He agreed with Dr. Baer that he had seen an abscess containing quarts of pus started up by electricity. He had too a vivid recollection of a case in which this undoubtedly was a fact. A large fibroid tumor without any symptoms whatever treated by electricity, followed by the formation of pus and death. The smaller tumors are the most easily removed. The larger tumors are the dangerous ones and still there has been a great deal said about the choosing of the tumor to which electricity is to be applied. There is no electrician living who can tell when he has a tumor to which he can apply electricity without harm and danger to the patient—this agent which is believed to be so harmless.

Dr. George I. McKelway said that before saying anything in regard to the subject under discussion, he wished to do Dr. Massey the justice of correcting a mistake that Dr. Hoffman had made. In the case of the fæcal mass, Dr. Massey did not diagnose it a fibroid tumor, but sarcoma of the ovary. He thought that Dr. Massey should have the justice of the correction.

He had been a member of this society for years but he had been a quiet one. He thought that this was the first time that he had opened his mouth in it. He had listened quietly and had thought patiently of many things. Sometimes he had been instructed, sometimes amused, sometimes he had been provoked and sometimes he had been surprised. It was largely in the line of the discussion of electrical matters that he had been surprised.

There are some words that are words to conjure with. We have a striking example of that just now not only in this country but all over the world in bichloride of gold. If Keeley had talked about the bichloride of lead he never would have had any one come to be cured. If he had talked about bichloride of tin he never would have been heard of. He talks about bichloride of gold and people flock by multitudes.

It is much so with this word electricity. It is a great thing. People think of Edison, of the Atlantic cable. Electricity is a word to conjure with and it has been conjured with a great deal.

Something has been said about the amelioration of symptoms. He had seen symptoms ameliorated in a most surprising way by a hypodermic injection of ten minims of water.

He did not want to discuss a thing the discussion of which he had condemned, but it had always seemed to him a little peculiar that this society or any society like it, supposed to be a scientific society, should give its time, meeting after meeting, to the discussion of the use of electricity in gynecology.

Dr. Joseph Price said that Dr. McKelway had covered beautifully some points in condemnation of just what he had been condemning; he felt that he owed the Society an apology for squandering its valuable time, but he had dealt with a huge number of tumors during the past summer and he felt that the surgery was greatly complicated by the use or the abuse of electricity and wanted to have a full and complete discussion of the subject that they might have a more accurate knowledge of the mischief done by electricity.

In regard to sloughing-fibroids, the electrician can assert that under any treatment, or without treatment, fibroids may slough and become gangrenous. This is true, but the larger number behave badly, slough, become adherent and undergo retrograde changes after the application of electricity. His position is that of Dr. Baer, of all of us in fact. Years ago we were timid, we were cowardly. Now Dr. Baer removes a fibroid-tumor because he feels that it is his duty to do so and because he knows how. He feels that it is his duty to remove it early, while the patient is in good health and all the conditions are favorable to a speedy recovery.

An allusion has been made to surgery. Much of the fibroid-surgery is bad. It begins in doubt and ends in disaster. Some of our operators are not prepared to do hysterectomy. We have had much discussion about pedicles; why should one who makes a pedicle discuss the subject with one who does not know how to make a pedicle? He could not do a hysterectomy without making a pedicle. The man who delivers a big fibroid with a pedicle as large as his coat-sleeve and places a clamp around it and screws it up and says he has difficulty in closing the incision and has to make a pedicle out of the tumor is one that knows nothing about hysterectomy. Unless he can go to the internal os and make a small pedicle fitting the lowest angle of the incision, he knows nothing about hysterectomy. The man who has never done a complete-extirpation has no right to discuss the subject with one who has done it a number of times. The man who never dropped the pedicle cannot discuss the subject with Martin, who drops them all. The man who has not made a complete-extirpation cannot discuss the subject with Dr. Baer who has done it a number of times.

Coming back to the pathology which is the most important point in the natural history of fibroid tumors, the pathology has changed greatly in the last thirty years. The pathology of all gynecology has changed. In Africa these tumors are unknown. In America they are exceedingly common. In Sir James Y. Simpson's clinic thirty years ago, they were scarcely seen. Now in Edinburgh they are numerous and behave badly. The same is true in his own experience. He was not prepared to say why this is so.

Dr. Massey claims benefit in nearly one hundred per cent. of the cases and then he tells us that a number of the sixty-five cases were not suitable for electricity; they had passed that period. It will be

interesting to know what became of these sixty-five cases. One of the ladies with a huge tumor whom Dr. Massey had treated was in his office and had it not been that two prominent electricians had discouraged this woman as to the prospect from surgery, she would have had the tumor removed. It is a common practice with some physicians to tell patients not to let any one touch them with a knife, saying that even if the abdomen is opened, the tumor cannot be removed. He had never in his office condemned electricity or any other treatment, except that he had advised patients to leave matters alone.

Dr. Marie B. Werner presented a paper on the "Analysis of Some Statistics on Supra-vaginal Hysterectomy." The Doctor stated that the three methods of treating the stump are meeting with varied results in the hands of different operators, and it becomes therefore an important matter to study method and operator together. The intra-peritoneal seems theoretically the ideal, but the general results fail to show the low rate of mortality necessary to place it foremost. Bantock abandoned it after careful study, on account of the great mortality. Schrœder and Martin both had a high mortality by this method and Martin abandoned it for total extirpation. The fact remains and must be always kept in mind, namely, the want of reliability in the ligature and the peculiar nature of the uterine tissue. The extra-peritoneal method gives the lowest rate of mortality and for this reason the method is the most promising. All the details are of paramount importance in this operation if it is to be successful. The operator must be prepared for every emergency before beginning to operate and complete the operation, when once begun. The doctor insisted on the complete removal of the tumor. She stated that there were several cases on record in which a portion of the tumor was allowed to be expelled through the abdominal opening. The danger of sepsis is very apparent. The ligatures should always be applied to healthy structures and this holds good in hysterectomy as well as in the removal of diseased appendages. The operator should work aseptically, surely and rapidly (consistently with good judgment) leaving if possible no ragged surfaces for subsequent sloughing. A small extra-peritoneal stump always gives the best results.

When the growth has originated low down in the uterus and developed laterally, filling up the pelvis, it is a difficult task to make a stump. Anatomical relations are to be studied and kept in mind, the tumor raised as much as possible out of its bed, adhesions released and properly cared for, the peritoneal covering incised three or four inches above the point where the nœud is placed, then stripped down; the enucleation of the tumor becomes an easy matter, comparatively, and the nœud is placed around uterine tissue and not fibrous. Not only is the stump much reduced in this manner but the danger of hæmorrhage and sepsis is minimized; there are still two other complications which are easily avoided by so doing: injuries to ureters or bladder.

Chrobak's results with total extirpation have certainly been most promising—four, with no deaths—and also in his later modification of retro-peritoneal fixation treatment of the stump—thirteen without a death. He abandoned total extirpation for the latter method on account of saving the time. E. Albert, of Vienna, reports fifty cases with three deaths, the stump treated in the way that Chrobak recommends. In total extirpation there are still some points that time alone will settle; the ultimate behavior of the bladder and vaginal roof, since both have often been much stretched and displaced by the growths removed.

DISCUSSION.

Dr. Joseph Price said that the discussion of the pedicle was always of interest and importance. The method of transfixion and the use of the wire or ligature were at first imperfect, but later the application of the ligature was perfected. Some operators, as Dr. Cushing, of Boston, prefer the elastic ligature and, Dr. Price did not know but that he succeeds better than with the wire. When constriction is depended upon, the ligature gives a constant and continuous pressure. With the application of the wire you have shrinkage and have to screw up the clamp. Hysterectomy is a piece of civil-engineering. He could not have done this work without special training. Applying forceps to serve as land-marks, you drop down the capsule and, beginning with a pedicle as large as your coat-sleeve, you end with one as large as your thumb. You need

not fear hæmorrhage. The elastic-ligature is not necessary. It prolongs the operation. In almost any method of hysterectomy you can get along with a few hæmostatic-forceps without the temporary clamp. There is a certain amount of work in the use of temporary-constrictors that you have to do over again. In cases of multiple-fibroids it is of great importance that the pedicle should be made in the way described. The bladder may come up between two of the tumors and unless you strip off the capsule until you come to the cervix there will be risk of catching the fundus of the bladder. In one of his cases he included the fundus of the bladder but the patient recovered. Mr. Tait did it in Albany but the patient recovered although there was a fistula which lasted for months. After applying the wire you must bring in the margin of the capsule and let it be caught by the wire.

Dr. Joseph Price also reported several cases of extra-uterine pregnancy.

He stated that he would refer to *tubal* pregnancy only, as he believed it to be the only variety, although, after rupture, it may be found anywhere in the pelvis or abdomen. He referred briefly to some of the most prominent points of this murderous accident—First, that it is common and on the increase. Secondly, that it is easy of recognition. Thirdly, that there is but one treatment. As to frequency: Pathological conditions favoring its occurrence are distressingly common and on the increase. From his experience he would say that tubal pregnancy was much more common in the cities than in rural districts. In regard to early recognition or diagnosis, he now worked by a method of exclusion, looking first for tubal pregnancy—as the most serious and dangerous trouble a woman can suffer with. Second, for appendicitis. Third, for pus in tubes or ovaries. Fourth, for suppurating dermoids, twisted pedicle, etc. He rarely failed to recognize tubal pregnancy where it exists. He thought it only fair to say that the general practitioner has given and is giving this vital subject much careful reading and thoughtful consideration. He is generally the first to see this class of cases and the skillful general practitioner is not slow in recognizing the existing trouble and is prompt to call in surgical aid.

Elliston J. Morris, M. D.,
Secretary,

Abstracts.

DYSTOCHIA FROM IMPACTION OF THE SHOULDERS.

Dr. Kortright says: That difficulty of delivering the shoulders after the birth of the head does occasionally occur, the following list of accidents will prove: Rupture of the fibres of the sterno-cleido-mastoid muscle with subsequent abscess of the neck, injury to the brachial plexus followed by temporary paralysis of the arm, fracture of the shaft of the humerus or separation of its epiphysis, cerebral effusion, or asphyxia, with consequent death of the child. Incredible as it may seem, the head of the child was torn off in endeavors to deliver the trunk when the shoulders had become impacted.

We frequently find multiparæ of the following character: They are wives of poor men and have borne their husbands from four to nine children at the regular tenement-house interval. In their youth, they were slender girls of less than the average height and have married early. Their sylph-like proportions have long since disappeared so that they present the large limbed, full bosomed cuboidal aspect with which we are all familiar. Repeated child bearing has caused separation of the abdominal recti, weakness of the oblique abdominal muscles, subinvolution of the abdominal walls so that the uterus falls forward when enlarged, and what they call their high stomachs become markedly accentuated during pregnancy. There may be no suspicion of rachitis about them, but their pelves are very shallow, the pubic rami widely divergent and one or all of the pelvic diameters small. When they stand erect, the axis of the uterus is nearer the horizontal than the perpendicular. If one has occasion to remove an adherent placenta from such a uterus he will be painfully impressed by the extreme extension of the hand necessary to reach the interior border of the placenta, or the anterior uterine wall. These women, bear, as a rule, large children which frequently present in the occipito-posterior position.

When such a person comes in labor, the head engages badly, progress is slow, and even if the forceps be used the uterus is in a condition of partial inertia by the time the head is delivered. The pains are in-

efficient to deliver the large body. One shoulder is caught above the symphysis at the angle of the parturient canal, the other is at the promontory of the sacrum or slightly below it. The head of the child is extended and laterally flexed at a right angle to the trunk.

It is just this condition concerning which so little has been written and the best management of which is not to be found in any text-book. It is plain that this position of the child is one of great danger; for the pressure of the maternal parts upon the body of the child without any corresponding pressure upon its head soon leads to death from asphyxia or effusion within the skull. We are all familiar with the cyanotic face and the pouting lips of a child in this position. Jacquemier, the first to mention this variety of dystochia, treated it by bringing down the arms and extending them over the head, but this method is acknowledged by himself and others writers to be difficult and to cause fracture of the arms. Hodge advises pressing the child's neck against the symphysis and in this manner bringing the posterior shoulder to the edge of the perinæum. When the posterior shoulder appears the child is to be carried backward and the anterior shoulder disengaged. Parvin advises traction with the finger in the axilla of the perineal shoulder or with the finger in each axilla. Lusk advises traction upon the sides of the head, or with the finger in the axilla. Mann advises pressing the neck backward upon the perinæum with traction till the anterior shoulder appears under the symphysis, and then forward pressure till the posterior shoulder is born. This is all that is written upon the subject.

By means of any of these procedures we would be able to deliver in the great majority of cases, but in none of them does the proper rationale obtain. How does nature relieve herself in this condition? In the *Medical Recorder*, vol. 37, p. 444, may be found the report of a case of impaction of the shoulders in which the pains were strong and delivery took place without external aid. In this case restitution was toward the right thigh of the mother. The face then turned backward toward the perinæum until it looked toward the left thigh. By this semi-revolution the posterior shoulder passed under the symphysis pubis and the anterior shoulder passed into the hollow of the sacrum. The mechanism was exactly analogous to that which obtains in most cases of occipito-posterior presentation of the vertex. This spontaneous rotation then is nature's solution of the problem and should furnish us a proper basis of treatment. Bearing in mind that the shoulders engage in the oblique diameter of the pelvis we should endeavor to rotate the child in the direction of the least resistance. And this direction will be that in which the anteriorly lodged shoulder passes away from the medial line of the mother and not toward it.

In practice this rotation will be best accomplished in this manner: Introduce the finger of the hand corresponding to the maternal thigh toward which the child is looking. If the restitution has been toward the right thigh use the right hand and conversely. The finger thus introduced will enter the axilla of the posterior shoulder on its dorsal aspect. Pull the shoulder sidewise and toward the symphysis. Do not push but pull. Make the dorsal side of the posterior shoulder the advancing surface. In this way the anterior shoulder is pushed away from the symphysis and is not crowded against it. Passing into the transverse diameter the shoulder glides into the hollow of the sacrum, thence to sweep over the perinæum.

This proposed method of unlocking the impacted shoulder is not mere theoretical reasoning, but has stood the test of actual experience. Previous to its adoption I had had one case of paralysis of the arm from injury to the brachial plexus caused by traction on the head. I had also lost a child from asphyxia during delay while trying in succession the methods given in the books. Since the adoption of this manœuver, I have had neither accident nor difficulty.

In the discussion Dr. Jewett after speaking in terms of high praise of practical nature of Dr. Kortright's suggestion says: In regard, however, to the management of the complication to which the paper alludes, I have been accustomed to depend upon a method something like this: When the posterior shoulder presents I lift the head well toward the mother's abdomen. I then place the fingers in the posterior axilla and lift that shoulder over the edge of the perinæum, pushing the perinæum gently back. The posterior

arm can then be released. When this has been accomplished, the other shoulder may be delivered usually with no difficulty. In other words, I deliver in detail, the entire bisacromial diameter never being allowed to engage at one time. This method has always served my purpose; yet I fully recognize the fact that there may be cases so difficult that it may fail; and I heartily commend the method of Dr. Kortright and shall hold it in readiness for use when the other does not serve.—*Brooklyn Med. Jour.*

THE CHOLERA, AND HOW TO PREVENT IT.

(ISSUED BY THE TENNESSEE STATE BOARD OF HEALTH.)

To prevent cholera, every one must help. The State Board of Health may issue circulars, and the local authorities may vigorously enforce regulations, but if each householder will not heartily co-operate in removing the causes which breed cholera and similar diseases, the pestilence, should it come, will be rendered many fold more disastrous than if otherwise. The following instructions have been drawn up with care, and explain what ought to be done:

1. To prevent cholera, it is necessary to remove the unsanitary conditions which give fatal activity to the cholera poison.

2. To keep a good heart and a cool head, and observe strictly the laws of health.

"A Dervish, traveling over the desert, met the Cholera, to whom he said, 'Where are you going?' The Cholera replied, 'I'm going to Bagdad to kill 20,000.' Some time after the same Dervish met the Cholera returning, and said, 'You vagabond, you killed 90,000.' 'No, no, said the Cholera, 'I killed 20,000; fear killed the rest.' "—*Oriental Legend.*

3. Prompt attention to all looseness of the bowels will generally prevent an attack of cholera. "To arrest diarrhœa is to prevent cholera." When cholera is about the slightest diarrhœa should be instantly checked. A good diarrhœa mixture, which every one should keep in the house, should be taken at once, a doctor should be sent for immediately, and all evacuations should be disinfected as if the case were one of cholera.

4. The unsanitary conditions which enable the cholera germ to become fatal are: (*a*) A tainted water supply; (*b*) foul privies or cess-pools; (*c*) foul ash-heaps; (*d*) damp, ill-ventilated houses; (*e*) defective drainage, ill-trapped sinks and imperfect sanitary appliances; (*f*) filth in any form.

All springs and wells should be inspected, even if their water is bright and sparkling, for then it may be most dangerous All suspected should be filtered and boiled. All tainted wells and springs should be closed, and whenever a cholera case is reported all drinking water drawn from rivers, springs or wells should be boiled for half an hour. Filtration is good, but it is best to boil afterward. Cisterns should be cleaned at short intervals, and so situated as not to be in close proximity to either drains, privies or cesspools, particularly so if built underground.

Cesspools, or foul privies, are nests for breeding pestilence, and centers for poisoning the earth, the air and the water. It is chiefly by their leakage into wells and underground cisterns, and their overflow into springs, branches and rivers, that they contribute to the propagation of cholera.

7. Damp, dirty, overcrowded houses predispose their inmates to attack. All low-class tenement property, outhouses, cellars, etc., should be thoroughly lime-washed; back yards should be frequently cleansed and disinfected; fresh air and sunshine, if possible, should be let into every room daily. Where there is a smell in any room which cannot be removed by opening the window, something is wrong, which ought at once to be put right, or mischief may follow.

8. The careful disinfection and prompt subsequent removal of dirt, filth, and decayed matter of all sorts, the vigorous use of soap and the scrubbing brush, the constant ventilation of all sleeping and living rooms, and immediate attention to all foul smells, always important, are never more so than when the cholera is hovering around.

9. The ordinary rules of health should be strictly observed in (*a*) cleanliness; (*b*) moderation in all things: (*c*) avoidance of all sources of cold and indigestion. Every one ought to wash from head to foot at least once a week, and the oftener body linen and bed clothes are changed the

better. Never eat with unwashed hands, especially when cases of diarrhœa or cholera are in the house. In the latter case some disinfectant should be added to the water before washing, and food should never be taken in the room with the patient.

10. To minimize the danger of infection it is well to be moderate in all things, particularly avoiding all excesses in drinking, in eating, or in exercise. Excess in drinking, sometimes resorted to from a mistaken idea of warding off the cholera, has the exactly opposite effect. Spirits are useless as a corrective of impure water. Excess in eating, by disorganizing the digestion, predisposes to diseases of the digestive organs, of which cholera is the worst. Eat well, but wisely, and avoid all unripe fruit, indigestible or tainted food, and everything that disagrees with you. Excessive exercise is dangerous, by producing exhaustion; so is prolonged bathing. Everything that causes exhaustion is bad. Avoid all sudden chills, especially when perspiring. Flannels should be worn next the skin. A flannel belt round the waist is strongly recommended. Avoid draughts and late hours,and always wear enough clothes to keep the body warm, especially at night.

11. When cholera or diarrhœa exists in the neighborhood of dairy farms, avoid milk coming from that district, and if other milk cannot be obtained, condensed milk is safer than fresh milk from infested districts.

12. If from any source a case of cholera should develop in any locality in Tennessee danger of its spreading may be minimized by (*a*) immediate isolation of the patient, (*b*) complete disinfection and instant removal of all excretions and other matters that come from him, (*c*) burning or thorough disinfection of all clothes, bedding, etc., soiled by cholera discharge.

13. Cholera secretions should be regarded as more dangerous than strychnine. The vessels into which they are discharged should always contain carbolic acid or other powerful disinfectants; they should be immediately emptied, and the privy, water-closet, sink or drain down which their contents are thrown should be flushed at least once a day with carbolic acid and water, chloride of zinc, sulphate of iron, or other equally effective disinfectants. Do not spare the disinfectants, especially in the case of privies and cess-pools.

14. All clothing,carpets,sheets, towels, etc., which have come in contact with a cholera patient should, if possible, be burned at once. On no account should they be sent to a public laundry or washed in common with the clothing of others. If not burned, before they are sent put them in a tub of boiling water mixed with carbolic acid, and afterward have them, as well as the furniture, etc., thoroughly disinfected by the free use of the fumes of burning stick sulphur, continued for at least four consecutive hours.

15. Do not be frightened. For one who dies of cholera in the worst years two die every year of typhoid and similar preventable diseases. No one who gets into a panic gives himself a chance. Doctors and nurses who are constantly attending cholera patients do not die in greater proportion than others. Prompt treatment of the disease in its early stages is almost always successful.

Please read this document with care, and try to remember the principles involved, and then preserve it for future reference.

TREATMENT OF PYOGENIC AFFECTIONS BY PRODUCTION OF ARTIFICIAL ABSCESSES

Fochier (Lyon) has recently suggested the production of artificial abscesses, by the subcutaneous injection of essence of turpentine, as satisfactory treatment for certain cases of infection. In a number of grave cases of puerperal infecton and of pneumonia he thinks he has seen recovery due entirely to this treatment. Dieulafoy (*Sem. Med.*, March 30, 1892) reports a desperates case of pneumonia successfully treated by Fochier's method. In his case subcutaneous injections of 1 gramme of essence of turpentine were given in each of the four limbs; the following day there was marked improvement in the condition of the patient. L. Bard (*Lyon Med.*, April 17,1892) reports a grave case of pneumonia where recovery was undoubtedly due to the production, artificially, of abscesses.

MENORRHAGIA.

℞ Tinct. canabis indica.....gtt. xxx.
Mucilage.....
Spts. chloroform āā.....ʒ i.
Aquæ, ad .....ʒ ij.

M. Sig.—Take a tablespoonful every three hours. A few doses are sufficient.

—E. E. Philips, *Med. Summary.*

CHOLERA NOTES.*

MARIE B. WERNER, M. D.,
PHILA.

In Hospital St. Antoine (*Bull. Med. 1892*)—each cholera patient receives a bath on admission, temp. 40° C, lasting from twenty to thirty minutes, to which mustard is added in the latter stage; should reaction fail to take place, transfusion is resorted to; 1500 grammes of artificial serum, 38° C. (Aq. dest. 1000, natr. chlorat. 6, natr. hydric. .05.) This treatment does not include those grave lightning-like cases. Systemic treatment is as follows: 1st Absolute dieting—2nd (a) Sol. acidi. lactici 15:1000, two liters daily—(b) Tea with rum; ice; Seltser water. (c) For persistent vomiting the stomach is washed several times daily with boiled water, and then filled with 500 grms. of lactic acid solution. (d) Every two or three hours a mustard bath is given, same temperature and time as stated above; should faintness or dizziness occur, the patient is placed at once in the horizontal position, using vigorous friction on the chest.

The bath raises the rectal temperature ½ to 2°. The arterial pressure and increased activity of the circulation produces a lessening or disappearance of the cyanosis, and promotes perspiration and sleep, frequently the urine is voided and the cramp relieved during the bath. (e) Should this fail, transfusion is resorted to several times daily. (f) To encourage excretion of urine, the bladder is filled with a warm solution of boric acid. (g) Adjuvants—Caffein, subcutaneous ether injections, oxygen, leeches, cotton wrappings. (h) As soon as the appetite returns, (third day of treatment) coffee, bouillon, and wheat bread are the first given. Milk had frequently produced symptoms of indigestion.—*Deutsche Med. Zeit.*, Sept., 1892.

Neuman (*Deutsch. Med. Woch.* Sept., 1892) desires to direct the attention of the practicing physician to the efficacy of the subcutaneous saline injections used successfully by Cantoni during the cholera epidemic of Italy in 1884. It is necessary to use large quantities of the solution (children 100 to 300 grms.; adults 1000 to 1,500 grms.). Shortly after the infusion there is a marked improvement in the pulse-rate; in very grave cases there will be a gradual relapse after a few hours, which makes it necessary to repeat the dose, a second, third or fourth time. This treatment can be carried out successfully by the general practitioner minus the complicated hospital appliances in the following manner: Take an ordinary clean cooking vessel (tea-kettle) boil the water 10 to 15 minutes at the end of which time the given amount of table-salt is added, (1 heaping teaspoonful to 1 litre of water) allowing it to cool to the proper temperature the vessel is placed at the required height to act as the reservoir for a syphon, one end of a long piece of tubing is placed into the solution and fastened securely; the other armed with the canula for insertion under the skin.

The injection is given preferably in the soft parts, directing the point of the canula toward the median line of the body and parallel to the integument. During the injection the canula is forced slowly along, in order to permit a greater distribution of the fluid and prevent a reflex. The lump which forms is rubbed vigorously with the one hand, while the other holds the canula. Large quantities should be divided and infused in separate places. The puncture is at once closed with adhesive plaster. Neuman warmly recommends this method based on satisfactory personal experience.

*Translated for MEDICAL AND SURGICAL REPORTER.

A CURIOUS INJURY BY A STROKE OF LIGHTNING.

There is an account in the *Archives of Otology* for January of a case in which a man was struck by lightning on the left side of the head. It passed down the ear and along the neck and breast to the right arm, where it burned through the flesh, leaving the bone exposed, and then passed out into the metal work of the buggy in which he was seated. Some days afterward he applied to Dr. Clark for relief from an otorrhœa which had supervened, when it was found that the external ear and the meatus were burned superficially and the tympanic membrane ruptured, either by the direct stroke of lightning or by the cauterization of the surface of the meatus, followed by suppuration which afterward penetrated the middle car. From the history and the appearances present the former hypothesis was considered the more probable.

AN EXTREME CASE OF SUSPENDED ANIMATION FROM CHLOROFORM RESUSCITATED BY DIRECT-INSUFFLATION IN THE INVERTED POSITION.

By A. E. PRINCE, M. D., Ph. D.,

CONSULTING OCULIST FOR WABASH RAILWAY, ILLINOIS STATE INSTITUTION FOR DEAF AND DUMB, ILLINOIS STATE INSTITUTION FOR THE BLIND, ETC.,

On July 22, 1892, chloroform was administered to Mr. John P—-, aged twenty-eight, for the purpose of opening the mastoid cells for a supposed abscess. The gentleman had a heart murmur, but it was believed that the administration would be unattended by especial danger, particularly as he had, within a few weeks, taken chloroform for another operation. No difficulty was at first experienced. Anæsthesia was rendered complete, and the operation was begun, but in a short time circulation and respiration were suspended, and the patient became livid.

The function of which organ failed first is not known, but, from the fact that there was no pulsation at the moment of the discovery of the arrest of breathing, and that the dark color followed so quickly it is presumed that the case was one of heart failure; which is also rendered probable by the existence of heart lesion, which was recognized.

No time was lost in temporizing, but resort was had at once to the inverted position. The man was suspended by the flexed knees from my shoulders, and subjected to a trotting motion around the operating-room. A description of this procedure will be found in the "Transactions of the Illinois State Medical Society 1890," and in the New York *Medical Journal*, August 22, 1891.

This inverted position, with a jolting motion, was continued while my strength lasted, after which I stood still, and my assistant practiced the Sylvester method, the body being still inverted and suspended from my shoulders. No response followed, and he was placed on the table; to all appearances he was dead. The skin was blue; a hasty ausculation revealed no signs of pulsation. Hæmorrhage had ceased, the last blood being of a very dark color. No time was lost, but the patient was again lifted to the shoulders of my assistant by whom he was trotted around the room for about one minute. At this juncture the account of the infant resuscitation by blowing directly into the mouth, published by Dr. W. E. Forest, in the *Medical Record* of April 9, 1892, entered my mind, and I called a halt, knelt down, took a deep inspiration, joined my mouth with that of the patient, and emptied the contents of my lungs into his.

The chest expanded, and the diaphragm, with the weight of the intestines, was raised, and I doubt not but that the flaccid heart was emptied of its passive blood.

Immediately the weight of the intestines and the elasticity of the chest forced a complete expiration. This was followed by another and another, until I could see that the lividity of the lids was less, though the ashen hue of the countenance persisted. A moment was taken to auscult the heart but no sound was discerned. The artificial expansion of the lungs was resumed, and continued for about three minutes, and we noted with gratification that the color of the lips continued to improve.

An interval was allowed for auscultation, but no effort at natural pulsation or respiration was detected. Again the inflation was resumed, and continued at the rate of about twelve in the minute, for about two minutes, when the gratification was enjoyed of hearing the first natural effort at respiration.

After a little time the patient was placed on a table, and the operation finished under ether anæsthesia.

This is the sixth case of suspended functions which did not respond to either the Marshall-Hall method or the Sylvester method, the first five of which recovered I under suspension treatment. Without this, am convinced all of these would have been lost. The foregoing is the only one that did not respond to the suspension method, and I am under unutterable obligations to Dr. Forest for paving the way to the employment of the direct inflation in the inverted position of the body.—*Med. Record.*

FIRST STAGE OF PNEUMONITIS.

℞
Tr. veratri viridis ..... ℥M xl.
Tr cinchonæ comp ..... ʒ j.
Potass. acetatis ..... ʒ ss.
Morphia acetatis ..... gr. j.
Aquæ dest., q. s ..... ʒ ij.
M. Sig.—ʒ j every two hours.

NOTES ON EPISTAXIS.

By J. K. HAMILTON, M. D. DUB., F. R. C. S. I.

In an elaborate article, in the *Practitioner*, Aug. '92, Dr. Hamilton sets forth the frequency with which physicians meet cases of severe hæmorrhage from the nose. He condemns the routine practice of plugging the nostrils, before a thorough examination is made and other means tried. He states that the source of hæmorrhage is from the septum in a large percentage of cases. The turbinated bones are not so prone to hæmorrhage.

The cause of bleeding in a majority of cases, is either traumatism, an erosion or an ulcerative process. Spurs or ecchondroses, are often found growing from the septum. The apex becoming the seat of dry incrustations, causes a breach of continuity, from which bleeding is apt to occur.

Hæmorrhage, is more frequently arterial, than venous, as it more often occurs, following the removal of ecchondroses, or exostosis. As to the best methods of dealing with hæmorrhage, the doctor, urges first a thorough examination, and unless the bleeding is very profuse or the surface from which it comes is very large, he recommends the *galvano-cautery point*, which application should be thoroughly made. He has found this method most effective.

In the use of cocaine for performing small operations, there is a liability of hæmorrhage following, after the effects of the drug have passed off.

Irrigations with hot water, to which iodine has been added, in the proportion of 1 to 10,000, are very useful. Iodine besides being slightly an antiseptic, is an hæmostatic.

Peroxide of hydrogen, a solution of antipyrin and acito-tartrate of aluminum, are also useful in controlling hæmorrhage.

The use of perchloricle of iron is condemned. If these measures fail he resorts to plugging the nostrils, iodoform gauze being the best material, and a small soft rubber catheter the best instrument for placing it. If one nostril is plugged too tightly bleeding may occur from the other.

THE RELATIONS OF PELVIC DISEASE TO PSYCHICAL DISTURBANCES IN WOMAN.

Dr. George H. Rohè read before the Amer. Ass'n of Obstet. and Gynecol. a paper upon this subject.

The author pointed out the frequency with which bodily conditions influenced mental states. Thus a torpid condition of the intestines, Bright's disease, putrefactive processes in the intestinal canal, etc., might give rise to melancholia and other disorders of the mental functions. It is not irrational to suppose likewise that diseases of the female sexual apparatus would have a not inconsiderable influence in the production or perpetuation of mental disorders. As a contribution to the knowledge of the subject the following report was submitted:

In a hospital containing 200 insane women, thirty-five were subjected to vaginal examination and twenty-six found with evidences of pelvic diseases. In eighteen of these the uterine appendages were removed with the following results:

Sixteen recovered from the operation and two died. Of the sixteen recovered, three have been discharged from the hospital completely restored, both physically and mentally. In ten, considerable improvement followed the operation in both physical and mental conditions, and in three the operation was of too recent a date to allow any definite expression of opinion.

The mental disorder present in the eighteen cases was melancholia in six cases, simple mania in one, puerperal mania in four, hysterical mania in one, and epilepsy with mania in three.

The author basing his opinion upon his experience, concludes as follows:

"The facts recorded demonstrate first; that there is a fruitful field for gynecological work among insane women; second, that this work is as practicable and can be pursued with as much success in an insane hospital as elsewhere; and third, that the results obtained not only encourage us to continue in the work, but require us, in the name of science and humanity to give to an insane woman the same chance of relief from disease of the ovaries and uterus that a sane woman has."

Selected Formulæ.

THE KEELEY CURE.

Dr. Keeley has taken great pains to keep his remedies a secret, but they have been secured and analyzed by competent chemists, and are now well known. The treatment consists in the use hypodermically. four times a day of a solution which shows an analysis of:

℞
Strychnia sulph.....gr. ½.
Atropia.....gr. ¼.
Acid boracic.....gr. xv.
Aq. dest.....oz. iv.

The formula of the tonic taken by the mouth is:

℞
Ammon muriate.....gr. j.
Aloin.....gr. ij.
Tr. cinch. comp.....oz. iij.
Aq. dest.....oz. j.
M. S. Teaspoonful every two hours while awake.

During the initial treatment—for the first one, two or three days—much heavier injections of atropia are given, in combination with morphine. Any physician will know at a glance that the quantity of strychnine used is so minute, considering its relative potency, that it can have little effect in modifying the action of the atropia. The tonics support, to a degree, but they, too, have little influence in controling the symptoms produced by that powerful drug.—*Times and Register.*

THE TREATMENT OF LUPUS OF THE NASAL MUCOUS MEMBRANE.

Cozzilino (*Rivista Italiana di Terapia e Igiene*; *Le Bulletin Médical*, No. 101, 1891) has tried with success the following treatment of lupus of the nasal mucous membrane. After twelve to fifteen applications of the galvano-cautery, which suffice to destroy the exuberant granulations of the ulcerous membrane, he employs the following formulæ to hasten the repair of the tissues:

1. Nasal douche morning and evening of tepid water to which has been added a teaspoonful of the following mixture:

℞
Rectified alcohol.....gms. 200.
Naphthol.....gms. 10.
Menthol.....dgms. 5.
Thymic acid.....gms. 2.

2. After the douche, every three or four days, apply the following solution upon a tampon:

℞
Distilled water.....gms. 50.
Trichloracetic acid.....gms. 6.

3. During the days when this solution is not applied the following is used, night and morning:

℞
Camphorated naphthol.....gms. 20.
Pure carbolic acid.....dgms. 5.
Glycerine.....gms. 25.

4. If there form yellowish, dense crusts, which are characteristic of this affection, then instead of detaching them at once they may be softened by the application of the following salve:

℞
Vaseline.....gms. 40.
Aristol.....gms. 3.
Mercurialized iodol.....dgms. 3.

5. During the day the following powder may be insufflated ten or twelve times through the nose:

℞
Aristol.....gms. 3.
Pulverized naphthol.....dgms. 5.
Boric acid.....gms. 10.
Resorcin.....gms. 2.

LEUCORRHŒA.

℞
Iron oxide, brown ("sub-carb.") } of each, 0.10 gm.
Powdered columbo } of each, 0.10 gm.
Powdered cinnamon } of each, 0.10 gm.
Powdered ergot.....0.25 gram.
One or two such powders daily.

—*Paillard.*

PILLS.

℞
Ergot extract.....1.5 grams.
Iron sulphate } of each, 4 "
Potassium carbon } of each, 4 "
Glycyrrhiza extract } of each, a sufficient quantity.
Powdered glycyrrhiza } of each, a sufficient quantity.
Divide into 50 pills. Two or three every morning, noon, and evening.

—*Braun.*

CACHETS.

℞
Calcium sulphide.....1 gram.
Dispense in 10 cachets. One, mornings and evenings.

For little girls Bouchert recommends frequent lotions of lead-water or decoction of marshmallow leaves, and the injection of a 1:3000 solution of corrosive sublimate.—*Mortimer*—*Wilson.*

CREOLIN-PEARSON IN DIPHTHERIA.

PAINT.

℞
Creolin-Pearson.....1-2 parts.
Water.....100 "
Externally!

The parts which are the seat of the false membranes, are wiped three times daily with a pledget of cotton saturated with this solution. At the same time, compresses of iced water or ice are constantly applied to the throat externally. Under the influence of this treatment, combined with a stimulant [wine, cognac], the author claims the false membranes and fever disappear in three days.

—Jacob Munk, *La Sem. Méd.*

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THE MEDICAL AND SURGICAL REPORTER.

SATURDAY, OCTOBER 8TH, 1892.

INOCULATION AGAINST CHOLERA.

Scientists have succeeded so far in their experiments with animals that they now consider themselves justified in experimenting upon men, to render them immune against Asiatic cholera. About two months or more ago, several persons were inoculated at Paris and the experiment created some considerable interest in scientific circles, while quite recently a *Herald* correspondent, Mr. Stanhope, has brought the matter to more general notice by undergoing the inoculation and then exposing himself to the disease in Hamburg. The papers—especially the *New York Herald*—have considerable to say about the matter just at present, but their communications really have very little scientific value, and although Mr. Stanhope has lived through the cholera epidemic, his case, while of very great interest, must not be looked upon as a demonstration of the efficacy of the preventive treatment.

Mr. Stanhope is certainly not the only person in Hamburg who exposed himself to the dangers of infection, and the only thing which he has proven is that cholera did not make way with him. Although he courted danger in every way possible, *we have no way of knowing that he has actually been infected by cholera and that the infection has been rendered harmless by the preventive treatment.* Mr. Stanhope could have carried out his experiment in Paris just as well as in Hamburg, by simply drinking a few pure cultures of the spirillum which causes the disease. Had he done that, and lived through it, we should know at least that he had infected himself with the parasites! But even this would have been no positive proof of the success of the inoculation, unless the experiment of drinking cholera cultures was repeated several times, for there is at least one case on record where a man swallowed the germs purposely and yet did not take the disease! This method, however, would hardly satisfy the *Herald*, for it would have furnished but one or two pages of material, at the most (with possibly an obituary notice a few days afterwards), while the present mode of experimentation furnishes many pages of printing matter.

We do not wish it understood for an instant, that the MEDICAL AND SURGICAL REPORTER is casting any slurs upon Mr. Stanhope or his enterprise, but we do wish most decidedly to warn our readers not to place too much confidence in this dare-devil (rather than scientific) experiment and not to expect too great results from preventive inoculations against cholera until the experiments are conducted in a

strictly scientific manner. In a word, we have the greatest respect for Mr. Stanhope's bravery, but we have not very much confidence in the value of his experiment, because, as we stated above, although we know that he underwent preventive treatment and exposure, we have no positive proof that the cholera germs have actually gained access to his intestines.

Periscope.

THERAPEUTICS.

THE ACTION OF ANTIPYRIN ON THE BACILLUS OF DIPHTHERIA.

M. Vianna, of Bahia, in Brazil, has been investigating the action of antipyrin upon Loffler's bacillus, and finds that it has marked bactericidal powers upon the pathogenic organism of diphtheria, and also that it destroys the toxic properties possessed by the products of that microbe.

His results are published in *Le Bulletin Médical*, March 30th, 1892. In his first series of experiments, M. Vianna found that in the proportion of 2½ per cent. antipyrin prevents the development of the bacillus of diphtheria in the various culture media in which it will usually grow. More than this, the addition of antipyrin to the tubes containing Löffler's bacilli in full growth killed them in less than forty-eight hours. The same result is attained in twenty-four hours, when the proportion of antipyrin is raised to 5 per cent. If the same proportions of the drug as those given above are added to the bouillon filtered from the bacillus, which will contain the toxic substances (which have been so fully investigated by Dr. Sidney Martin and described by him in the Goulstonian Lectures) elaborated by it, it may be proved that the poisonous products of the micro-organisms lose in part these toxic properties. For instance, guinea-pigs were inoculated with the filtered bouillon from cultures of the bacillus of diphtheria, and all died in less than three days; whilst if from 4 to 8 per cent. of antipyrin were added, the animals lived from five to twenty-four days, thus showing that although the drug did not render the inoculation harmless, yet its toxicity was considerably diminished.—*Lancet.*

SULPHONAL POISONING.

Koeber (*Cetralbl. f.klin. Med.*, March 12th, 1892) relates the following case. A man, aged 52, became very melancholic in consequence of increasing deafness, and more particularly of tinnitus. The sleeplessness was treated by bromide salts, and sulphonal. The latter was given in doses of 0.5 to 1.5 g. (the larger dose rarely) and continued during four to five weeks. After a temporary improvement repeated vomiting or, abdominal pain referred to the navel, and obstinate constipation supervened. A change in the urine was also noted. The daily quantity was under 1 litre. It was Burgundy red to reddish black in color, and contained at first no albumen and never any sugar. It did not give exactly the tests for hæmoglobin. Heller's reaction was absent. The specific gravity was 1021. The coloring matter was partly thrown down by alcohol. The crystals thus obtained were soluble in water, not in ether and chloroform. The chloride salt was taken up by amyl alcohol with coloration. Lead oxide precipitated and took up the coloring matter, when treated with acetic acid and common salt hæmin crystals were obtained. No sulphonal was present. The sulphonal was omitted but the color of the urine deepened, albumen, and formed elements—leucocytes, casts, but no red cells being found. Then retention of urine supervened, and later death. It would appear that the sulphonal was stored away somewhere in the body, possibly in the liver. The absence of albumen at first would apparently prove that the excretion of hæmoglobin could produce a true renal inflammation.—*Brit. Med. Jour.*

COCAINE.

M. Bignon(*Bull. de Thérap.*) formulates the results of his experimental researches as follows: (1) Cocaine parts with its valuable anæsthetic properties in a decidedly acid solution. (2)In such solutions its power as an anæsthetic is not destroyed, but becomes latent. (3) The anæsthetic property is fully restored by simply neutralizing the acid. (4) All the mineral and organic acids used in the experiments operated in the above manner. (5) The anæsthetic energy of cocaine attains its maximum when, all its acid having been neutralized, the alkaloid is held in sus-

pension by a slightly alkaline liquid. This preparation the author calls milk of cocaine. (6) Milk of cocaine is obtained by precipitating the hydrochlorate or other salt of cocaine by a slight excess of carbonate of soda. The bicarbonate does not act so well. (7) Most of the cocaine salts, especially the hydrochlorate, retain an appreciable quantity of acid; hence their solutions do not possess the full anæsthetic potency of the alkaloid; i.e., a portion of the same remains latent. (8) The anæsthetic power of cocaine salts varies greatly in different cases. Some crystallized hydrochlorates, though perfectly pure, are so acid that 10 centigrams, simply dissolved in water, are no more efficacious than half the quantity when neutralized and made into milk of cocaine. (9) The surgeon's first care, therefore, before using a solution of any cocaine salt, should be to assure himself of its neutrality; this can only be obtained at a sacrifice of limpidity; it is accompanied by some degree of opalescence. (10) The difference in the quantities required for production of anæsthesia is in most cases explainable by the difference in the acidity of the solutions employed. (11) The effect of subcutaneous injections of milk of cocaine on the human subject has yet to be ascertained. Experiments on dogs have given encouraging results in this direction, but the author has not succeeded so far in localizing the action. Milk of cocaine should always be prepared extemporaneously; as by keeping, the alkaloid is thrown down from the solutions, and much of their efficacy is lost.

MEDICINE.

DIABETES MELLITUS EXCITED BY FRIGHT.

The onset of acute glycosuria after mental trouble has recently been commented upon, severe emotional disturbances in some cases being looked upon as the cause of sugar excretion. The following case, related by Teschemacher, is an illustration of this point. The patient was a delicate boy, seven years of age, who had gone through an attack of measles some months previously. Convalescence was very slow; and on account of nocturnal incontinence the urine was examined and found to contain 4 per cent. of sugar. The child was hereditarily predisposed to diabetes, an aunt having died in early life of the disease. Some months later the patient was sent to Neuenahr. The quantity of of sugar then present was 1.9 per cent, but after eight days of treatment with restricted diet it fell to .35 per cent. Bread was then allowed, and in a further period of eight days the sugar had entirely disappeared, and it was likewise absent some days later. Milk was then added to the diet. On the following day the mother sent the boy, who hitherto had not been allowed out of sight, to the post with a letter. On the way he was attacked by a dog, which sprang at him, and he fell to the ground, where he lay half unconscious with terror. He was carried home and put to bed. Trembling at first and speechless, he lay in bed for some hours before he partook of food, while he repeatedly asked for drink. Next day he was brought to Teschemacher, who examined the urine and was astonished to find 3.3 per cent. of sugar. According to the mother, the quantity of urine passed was increased. Restricted diet was again ordered. On the following day the sugar stood at 2.4 per cent.; two days later at only .15 per cent.; and at the end of eight days it had completely disappeared. This case furnishes a striking example of the relapse of glycosuria after great mental excitement. Dietetic errors were strongly denied by the mother, and the ingestion of milk once in measured quantity could not have led to it, as the amount of sugar passed was greatly in excess of lactose in the milk. —*Bérlin. Klin Wochenschr.*, No. 2, 1892.

ASSOCIATED SPASM OF THE SUPERIOR RECTI MUSCLES.

Dr. Reich, of Tiflis, records the following case (*Vestnik Ophthalmologii*). On the 8th of March 1890, a man of thirty years presented himself with the complaint that for ten days his eyes closed and turned upward involuntarily about every ten minutes—sometimes even oftener. He was consequently unable to go about without assistance, and could see nothing during the three or four minutes the spasm lasted. He was otherwise healthy, with light eyes, and moderately dilated pupils. Reich had soon an opportunity of seeing the condition described by the patient, and found both eyes so forcibly moved upward that the pupils, notwithstanding a slight simultaneous raising of the lids, were

hidden from view. The eyes did not remain fixed and motionless in that position, but underwent nystagmic movements, the excursion of which, though varying, was never great. During the course of forty minutes three such attacks, each lasting four to five minutes, were observed. In the intervals the position of the eyes was normal. All that could otherwise be made out was pretty marked drowsiness, and a somewhat slow action of the heart. As to the cause, he had had three days' fever just before the attacks began; there was no history of any blow or any headaches. He did not drink to excess. The treatment adopted was rest with thirty grains of iodide, and an equal amount of bromide of potassium in the twenty-four hours. In a few days the attacks after getting gradually less frequent, stopped altogether.—*Amer. Jour. Med. Sci.*

ALEURONAT AS A FOOD IN DIABETES.

Ebstein (*Deut. med. Woch.*, May 12th, 1892) says that an exclusive animal diet of meat and fat is only possible for a short time, and then bread in as small quantity as possible has to be allowed in addition. The bread recommended for diabetics, whether made from animal or vegetable albumen, has hitherto been found an unsatisfactory substitute for ordinary bread. Even gluten bread has gradually come to be less used, especially in Germany, and a small quantity of ordinary bread up to 100 g. is allowed in preference. Hundhausen was the first to introduce the vegetable albumen known as aleuronat, and prepared from wheat. It is a dry powder, yellow in color, and without taste or smell. It never contains less than 80 per cent. of nitrogenous matters, nor more than 7 per cent. of carbo-hydrates. It may be used in the place of flour for making soups, sauces, etc. Bread made with aleuronat has been recommended, but the quantity of aleuronat present was at best but moderate in amount. The author has, however, succeeded in making a very satisfactory bread with it, which contains in the dry substance 66 per cent. of nitrogenous matters. Thus a diabetic, in taking half a pound of aleuronat bread containing in the dry substance even 50 per cent. of nitrogenous matters, gets 80 g. of vegetable albumen and only 72 g. of carbo-hydrates. Thus he can obtain a comparatively large quantity of the needful albumen from vegetable albumen in the same way as individuals in health. The author says that he has found aleuronat very useful in actual practice.—*Brit. Med. Jour.*

EPILEPSIA PROCURSIVA.

John Ferguson, M. D., (*N. Y. Med. Jour.*, Sept. 5, 1891.) regards this form of epilepsy especially interesting from a medico-legal point of view, as many persons who are now genuine epileptics have suffered from irregular symptoms before their disease declared itself, and others have only these premonitory conditions at the time when criminal acts were perpetrated. He divides this variety of epilepsy into three groups: 1. Those cases where the procursion constitutes the entire attack. 2. Cases where the procursion immediately precedes an ordinary attack af epilepsy. 3. Where the procursion follows an epileptic attack. In a case recorded by the author, the patient, a child, fell out of a high chair when two years old, and had immediately after vomiting and vertigo. A month later he would suddenly stare, flush in the face, rush forward, and then stand with a fixed look. When the attack passed by he would move about as usual. These continued for over a year, when the ordinary epileptic seizures developed. A female patient, age twenty-four, only had attacks when at the table. The face would become pale and then flushed, and the eyes staring. She would rush away from the table, stand still, sit down, or quietly return. No cause could be found. She was unconscious of these acts. At no time was she ever known to have a regular epileptic paroxysm. A third case was that of a man age forty-five, who had undergone a great deal of fatigue, exposure, and excitement. The most characteristic feature was the length of individual attacks. He would pass into the status epilepticus, and in this condition run straight ahead, stand still, then rush on again and again stand. He would sometimes do this for two hours, and then go to sleep. Ordinary epilepsy after a time followed. Another patient began to exhibit spells of absent-mindedness at the age of seven years. Three years later he was noticed to make short runs, of which he had no knowledge when questioned, and at the age of fifteen regular epilepsy

came on. At this time he would perform the run after the epileptic attack. Dr. Ferguson belives that to begin early and well is the real key to success in the treatment of epilepsy, and urges that the closest attention be given to all cases of absent-mindedness and momentary loss of consciousness.

MYELIN NERVE FIBERS IN DEMENTIA.

Dr. Targowla concludes (*Jour. de Med. de Paris*, Oct. 25th, 1891) that in all layers of the gray substance, myelin nerve fibers exist in a transverse direction, whose exact topography has not been pointed out. These disappear more or less completely in all dementias, whether paretic or not. The anterior cerebral lobes are most affected. The relations of this lesion to those of the vessels, nerve cells, neuroglia and meninges, has not been determinded.

DISSEMINATED SCLEROSIS DURING CONVALESCENCE FROM VARIOLA.

Sottas (*Gaz. d. Hôp.*, April 12th, 1892) records the case of a youth, aged 18 years, who contracted variola in June of last year. The rash was discrete, but the nervous symptoms were so severe as to lead to the supposition that he was the subject of meningitis. He became semi-comatose and paralyzed generally; his speech was slow and dragging rather than scanning: there was slight nystagmus, without tremor of the head, and atrophy of the muscles of the trunk and limbs, with great diminution of muscular power. In fact, at this time the paralytic symptoms were dominant, but they disappeared little by little, and gave place to contracture. The reflexes became exaggerated, and there was inco-ordination of voluntary movement, with the characteristic tremors. At the end of February, 1892, he presented the typical picture of disseminated sclerosis. The sphincters were normal, and common sensibility, the special senses and muscular sense were preserved. There were no trophic troubles of the skin. Intelligence was diminished ; he was excitable, impatient, and subject to violent fits of rage without much cause. The author looks on the case as a typical example of disseminated sclerosis of infectious origin.—*Brit. Med. Jour.*

HYPERTROPHY AND DILATATION OF THE HEART IN ADOLESCENCE OR CARDIAC ECSTASIS OF GROWTH.

Blache (*Mal. de l' Enf.*, Paris, 1891, 529.) writes that the principal cause of these cardiac dilatations may be considered the early development of the heart opposed to the late or insufficient development of the walls of the thorax. The treatment should respond to these indications and should moderate the over-activity of the cardiac movements and favor the increase of the capacity of the thorax. As special treatment of the heart the use of digitalis, with or without the addition of iron, of caffeine and particularly the tincture of convallaria are recommended. The tincture of convallaria may be used alone or associated with iodide of potash. The diet should be tonic and such as to rebuild the patient. Wise gymnastics, appropriate to the age and the nature of the conditions, aid in the general development of the patient. Frictions of the skin, either dry or with alcohol, by the aid of a woolen glove, have been used with good results, and are to be preferred to hydro-therapy. During the gymnastic lessons massage of the trunk, of the chest and limbs, is to be employed both to exercise the functions of the muscles and te moderate the gymnastic exercises. Specially to be recommended are certain respiratory gymnastic exercises, which give the best results in developing the thorax and enlarging the chest.

ON ASSOCIATED AND SUBSTITUTE MOVEMENTS IN THE PARALYZED.

Prof. Senator considers this subject in connection with a case. He divides them into three groups. Group (1) includes movements in non-paralyzed muscles, with, or instead of, an intended movement. Group (2) includes movements of similar nature in paralyzed muscles. In group (3) the original movement and its substitute or associated movements has been variously explained. Transference of reflexes, overflow of normal impulse, increased excitability, loss of inhibitory power, and an insufficient decussation of the pyramidal tracts, have all been invoked to explain these phenomena. The cause may be situated altogether outside of the central nervous organs, as in S.'s case, which is the first of the kind on record. A. R., now 53 years old, received a compound fracture of the skull twelve years ago. A

year later he became hemiplegic on the right side with aphasia. The hemiplegia and aphasia improved spontaneously to a considerable degree. After the fracture, he claims to have always experienced pain at the angle of the jaw on the right side and upon swallowing. The tongue deviates strongly to the right. In rest, the arm is lightly flexed and held to the side in pronation, the fingers flexed, the index finger over the flexed thumb. Excitement and irritation bring on choreic movements. Otherwise he presented the usual picture of an old hemiplegic. On protruding the tongue, either actively or passively, whether forcibly or gently, the paralyzed arm becomes flexed, the index finger extended, the other clenched, while the hand is raised to a level with the ear as in a military salute. The same movements were produced by pressure along the painful area at the angle of the jaw and along the anterior edge of the upper third of the sterno-mastoid muscle. Senator believes this to be due to an inflammatory infiltration around the nerves of the cervical plexus extending up to the root of the tongue. The spot is too high up to belong to the brachial plexus. He believes that the movement is reflex and not due to direct irritation.—*Berlin, Klin. Wochensch*, No. 132, 1892.

BENIGN ULCERS OF THE PHARYNX.

Dr. T. Heryng, of Warsaw, under the name "angina ulcerosa benigna," understands a hitherto-undescribed disease, which is characterized by the appearance of ulceration, generally simple, on the arcus anterior in the vicinity of the tonsils, with sharp edges and without inflammatory margin with a somewhat excavated base, covered with a grayish-white exudation which cannot be rubbed off. The length of the ulcerations is about 1 centimetre ($\frac{2}{5}$ inch), the breadth 6 to 8 centimetres ($2\frac{2}{5}$ to $3\frac{1}{5}$ inches). It does not bleed when touched, and is not very painful. After two or three days this ulceration takes on a healthy action, and after ten to twelve days it heals completely without leaving any scar. Slight general reaction of the organism always accompanies this disease, which resembles most the so-called "angina aphtosa" of B. Fraenkel. The bacteriological examination of the exudation of these ulcerations revealed the presence of two varieties of bacteria,—*streptococcus monomorphus* and *variegatus*,—but as further investigation proved, only the first was constant. The author has observed ten cases of this disease, and in two cases bacteriological examinations were made.—*Gazeta Lekarska*, Nos. 7 and 8, 1892.

SURGERY.

CATHETERIZATION OF THE BILIARY DUCTS.

Terrier and Daily (*Rev. de Chir.*, February, 1892) give the following summary of their anatomical and clinical experiences concerning the feasibility of passing a probe from the gall-bladder along the cystic and common bile ducts: (1) As a rule catheterization of the biliary passages seems to be attended with less difficulty in pathological cases particularly when these passages are dilated in consequence of retention of bile in the cystic duct. (2) In many cases, however, as a result either of curvature of the cystic duct, of persistence of its valves, or of the entrance to the duct being seated on the side of the bladder and not at its hepatic extremity, catheterization is attended with much difficulty. (3) In some cases this difficulty is insurmountable, whilst in others exploration with a probe may be practised very readily. (4) It is impossible to lay down any rules for the guidance of the surgeon. All that can be done is to point out the anatomical conditions by which the results of attempts at catheterization are likely to be influenced. (5) Forcible catheterization, even when the instrument is guided by the finger applied to the under surface of the liver, does not seem to be justifiable, and is always likely to be attended with risk. The author hold that in catherization of the biliary passages silver probes should be used, as metallic instruments can be more effectually sterlized than those made of gum or rubber.—*Brit. Med. Jour.*

A NEW TREATMENT OF CONGENITAL DISLOCATION OF THE HIP-JOINT.

That indefatigable worker, Professor Lannelongue, has recently been led to study this disease, and on December 23, 1891, he announced to his colleagues of

the Société de Chirurgie the discovery of what he considers to be a rational remedy for this malady. A dozen pathological specimens in the museum of the Hospital Trosseau show clearly that the displacement is due to the absence or, at best, rudimentary development of a cotyloid cavity, a like absence of a capsule, and a rudimentary femoral head. By resecting the head of the femur the only result obtained is the subsequent shortening of the limb by interfering with the growth of the femur. Nor is the obvious indication to create a new acetabulum fulfilled by detaching a periosteal flap. Mindful of the sclerogenic properties of zinc chloride discovered by him, M. Lannelongue has utilized his method as a means of raising a ridge of new bone round the head of the femur, and so preventing its displacement. On November 17th he performed this operation on a little girl, aged, three, the subject of this disease. The patient being under the influence of chloroform, and the limb being maintained in extension, twenty drops of a 10 per cent. solution of $Zn\ Cl_2$ were deposited by means of a syringe on the surface of the bone at eight different spots just above the femoral head. A week later a hard, osseous ring was clearly perceptible at this situation. A fortnight after the first operation a second injection of the same solution was practised, with the effect of still further accentuating the acetabular ridge. The tiny subject of this interesting experiment was presented at the meeting. The profession will await with curiosity the ultimate result of this novel essay in the field of constructive surgery.—*Lancet.*

INTESTINAL ANASTOMOSIS AND SUTURING.

Abbe, after reporting several cases of lateral intestinal anastomosis (*Medical Record*, N. Y., vol. xli., No. 14), considers the different methods for accomplishing this purpose. He objects to plates of bone, potato, or catgut, for the reason that the foreign bodies may cause obstruction, that leakage may occur, and in the case of Senn's plates, on account of the necessarily limited size, the opening in the bowel becomes, after contraction, inadequate for the performance of its function. The few extra minutes required to do the method of simple suturing does not add any complication to the case while the security against leakage and blocking is of great value.

The author had the opportunity of making an autopsy on three cases in which he had performed lateral anastomosis. In the first case Senn's plate had been used. The patient died six months after operation. The aperture made in the bowel at the time of operation was one and one-half inches in length. It had contracted to three-fourths of an inch, and was inefficient, except when laxatives were employed constantly. In the second case, the patient had died six months after anastomosis with catgut rings. The opening had contracted from one inch and a half to half an inch. In the third case, eight months after lateral anastomosis of the sigmoid by suturing, the aperture had contracted from three inches to one and one-half inches. This was perfectly competent to perform its functional work.

It is believed that the future utility of lateral anastomosis depends upon openings four inches in length in the sides of the adjacent bowel. This is almost impossible with bone plates, and only to be carried out with very long catgut rings or vegetable plates, and with less security and as much consumption of time as by suturing. The contrast is enormous between dropping back into the abdominal cavity an accurately sutured, absolutely tight and flexible, anastomosed intestine to any position in the cavity which its surroundings demand, and the returning of a huge bunch of bowel, inside of which there is a pair of five-inch plates of bone or raw potato, to remain as irritating foreign bodies stimulating peristalis and tugging at the wound until they are sufficiently softened to be carried away.

It is recommended, in cases of great fecal accumulations to first establish an artificial anus and allow some days for recuperation, when the anastomosis may be performed.

The technique of simple suturing is thus described: "Bring the two surfaces that it is proposed to unite well up in the wound and surround them by small compresses of gauze, towels, or flat sponges wrung out of hot water. Have at hand half a dozen cambric needles threaded with the ordinary finest black embroidery silk that has been well boiled and kept in alcohol. Cut in lengths of not more than twenty-four inches and tie with a single knot at

the eye of the needle, with one end cut to within two inches. Apply two parallel rows of continuous Lembert sutures a quarter of an inch apart and an inch longer than the proposed cut. Leave each thread with its needle attached at the end of its row. Now open the bowel by scissors, cutting a quarter of an inch from the sutures, both rows of which are to remain on one side of the cut. Make the bowel opening four inches long. Apply clamps temporarily to several bleeding-points, pinching the entire cut edge without hesitation. Apply no ligatures. Treat the apposing bowel in the same manner. The clamps remaining *in situ*, the parts are quickly rinsed with water. Another silk suture is now started at one corner of the openings and unites by a quick overhand the two cut edges lying next the first rows of sutures. The needle pierces both mucous and serous coats, and thus secures the bleeding vessels, from which the clamps are removed as needles reach them. This suturing is then continued round each free edge in turn, and all bleeding-points thus secured more quickly than by ligature. The serous surfaces around these button-holes are then rapidly secured by a continuation of the sutures first applied, the same threads being used, the one nearest the cut edge first. The united parts are again rinsed with water and dropped into place.

In conclusion, Abbe reiterates his conviction: 1. That the attempt to simplify the technique of lateral anastomosis by bone plates and other devices has not improved it. 2. That lateral anastomosis properly done is eminently the safest and best method of restoring the canal in most cases. 3. That simple and thorough suturing with a fine silk continuous suture, applied after the manner detailed, is most satisfactory. 4. That in order to allow for the inevitable tendency to stenosis, an aperture four inches long should be made. 5. That scarifying apposing surfaces is entirely unnecessary to quick and solid repair.—*Amer. Jour. Med. Sci.*

TREATMENT OF APPENDICITIS.

Dr. Senn arrives at the following conclusions:

1. All cases of catarrhal and ulcerative appendicitis should be treated by laparotomy and excision of the appendix as soon as the lesion can be recognized.

2. Excision of the appendix in cases of simple, uncomplicated appendicitis is one of the easiest and safest of all intra-abdominal operations.

3. Excisions of the appendix in cases of appendicitis before perforation has occurred, is both a curative and prophylactic measure.

4. The most constant and reliable symptoms indicating the existence of appendicitis are recurring pains and circumscribed tenderness in the region of the appendix.

5. All operations should be done through a straight incision; parallel to and directly over the cæcum.

6. The stump after excision of the appendix should be carefully disinfected, iodoformized and covered with peritoneum by suturing the serous surface of the cæcum on each side over it with a number of Lembert stitches.

7. The abdominal incision should be closed by two rows of sutures, the first embracing the peritoneum, and the second the remaining structures of the margins of the wound.

8. Drainage in such cases is unnecessary, and should be dispensed with.—*Medical Progress.*

TREATMENT OF SPRAINS.

Dr. N. W. Cady regards the following as an infallible remedy for sprains: A half hour's douching with water at a temperature of 120 degrees F., and the fixation of the joint by a splint on the flexor side of the joint, or upon the extensor side, if that be more convenient.—*Med. Record.*

OBSTETRICS.

MISSED ABORTION,

Three typical cases of this condition are presented to his reader (*Lancet*,) by Dr. Lewers, Obstetric Physician to the London Hospital. He says:

Cases of missed abortion are by no means uncommon; they are easily recognized if the possibility of the existence of the condition is kept in mind and proficiency has been acquired in the bimanual method of examination especially so far as

concerns the determination of the size of the uterus. Yet comparatively little prominence has been given to the subject by the majority of writers on gynæcology, with the notable exception of Dr Matthews Duncan, whose classical lecture on "Missed Abortion" first led me to recognize cases of the kind. The history is usually of great importance. In most cases the patient, having been previously regular, misses one or more periods and, especially if more than one period has been missed she probably believes herself to be pregnant. If it should happen at this time that the medical attendant is called on to make an examination, the size of the uterus as determined by him may be of much value in making the diagnosis when other symptoms arise later on. We have, then, to begin with, an interval of amenorrhœa accompanied by the other symptoms and signs of early pregnancy. Generally the first indication of there being anything unusual in the case is the occurrence of hæmorrhage, usually at first slight and intermittent, the intervals between the losses being days or weeks; or it may be that there is a constant, blood-stained discharge, the proportions of blood varying from time to time. It is usually on account of this hæmorrhage that the patient seeks advice. It is obvious how valuable a previous examination of the patient may prove, if a month or more has elapsed since the previous examination: for it may be found that the size of the uterus has remained stationary or has even somewhat diminished. It often happens, however, that we have no previous examination to guide us, and then it is best to compare the size of the uterus when the case is first seen with the size it should have been had the pregnancy been a normal one, reckoning from the beginning of the interval of amenorrhœa. The treatment depends on the amount or persistence of the hæmorrhage. In some cases bleeding is inconsiderable till pains come on leading to the spontaneous expulsion of the ovum. In other cases bleeding is often rather free from time to time, and may be continued over a long period without the uterus showing any tendency to discharge its contents. In the second case described, bleeding had lasted three months. In such cases the right treatment is to dilate the cervix and clear out the uterus.—*Md. Med. Jour.*

GYNECOLOGY.

PREGNANCY AND OVARIAN TUMOR.

Dr. Wm. Gardner (*Montreal Medical Journal*) says:

The association of pregnancy and ovarian tumor, if left to nature, is fraught with danger to the woman, whether the termination be premature or at full term. When left to nature, abortion or premature labor may occur, in either case with frequently fatal results to the mother.

When the case proceeds to labor at full term, the result to the mother may be rupture or such other injury to the tumor that fatal peritonitis carries her off.

Tapping of the tumor, while it may temporarily relieve tension, is by no means free from danger by injury to the uterus or otherwise, and it does not cure the patient.

Ovariotomy with modern precautions is nearly as safe as in the non-gravid condition of the uterus, while the woman is at once cured of a disease which must ultimately demand operation.

The second case here related shows that serious complications such as torsion of the pedicle and consequent peritonitis with adhesions, necessitating the use of the drainage tube for so long a period as five days, does not necessarily lead to abortion.

Ovariotomy in the present status of surgery, in the great majority of cases, must be the only proper treatment, and is often urgently demanded to relieve tension.

The indication for the operation in the case of small abdominal tumors is even more urgent, because of their great liability to torsion of the pedicle; and in the case of the pelvic tumors, by reason of the almost certain rupture or necrosis from compression during labor.

CONSERVATIVE TREATMENT OF TUBAL DISEASE.

At the meeting of the Academy of Medicine, says *New York Medical Journal,* Dr. Paul F. Mundé read a notable paper on the conservative treatment of salpingitis. The paper was remarkable for the clearness with which it showed the absence of justification for what the author termed the Birmingham epidemic, meaning the rage for salpingo-oophorectomy. He con-

siders it one of the draw-backs to the Listerian system that it has robbed certain mutilating and unnecessary surgical procedures of their dangers to life and consequently led to their indiscriminate and uncalled for execution.

Dr Mundé used the word conservative in the sense of preservative of the essential organs in women, and it is interesting to note that their preservation is not incompatible with a curative laparotomy, as was strikingly brought out in the discussion by Dr. Polk, who related the history of a case in which he had removed the ovary of one side and about half the ampulla of the oviduct on the other side, and yet the patient conceived.

This case is in striking contrast to the opinions of those who declare that in cases of tubal disease the organs are rendered useless, and that their removal is therefore really of no loss to the patient.—*Mèd. Mirror*, Sept, 1892.

AMENORRHŒA OF SCHOOLGIRLS.

Dr. T. A. Reamy in discussing the amenorrhœa of anæmia, common to schoolgirls, says: (1) She must leave school, and not even study at home. (2) She must spend several hours each day in the open air, either walking or riding. In winter she must, of course, be warmly clad; but must wear no sheepskins or other chest-protecting pads. Standing in the open air, she must be induced to breathe deeply with the mouth closed, this should be done for at least fifteen or twenty minutes, and be repeated at least twice a day. Nothing that can be done will more rapidly improve the character of her blood. (3) She must sponge her extremities and body each morning on arising from bed. The water must be of the temperature of the room, and she must practice friction freely with an ordinary towel. (4) She must drink plenty of milk and eat plenty of beefsteak. (5) She must take small doses of iron, combined with some bitter tonic, three times a day. Improvement may be somewhat slow, but if this course is faithfully carried out a perfect cure will result, and her education may then be finished.

If this course or its equivalent be not followed, these cases will go from bad to worse, and finally die of pulmonary tuberculosis.—*Arch. Gyn. Obs. and Ped, Canada Lancet.*

HYGIENE.

IMMUNITY PRODUCED BY MILK.

Brieger and Ehrlich (*Deut. med. Woch.*, May 5th, 1892) rendered a gravid goat immune against tetanus. Up to a certain point ascertained by the authors, immunity could be conferred on mice against inoculation with tetanus bouillon by subcutaneous injections of the milk (0.2 centigramme) from this goat. By feeding the older mice with the goat's milk, no immunity could be brought about, perhaps in part because mice do not thrive on this milk. It is indispensable to isolate these protective substances. After the separation of the casein, the whey still retained the protective powers of the milk. The authors say that they have also obtained positive results by the same method in the case of enteric fever infection.—*Brit. med. Jour.*

CATARRHAL LARYNGITIS OF BICYCLISTS.

Dr. Rayoneau (*Med. Neuigkeiten*, No. 2, 1892) describes it as follows: Acute beginning; sensation of dryness; cough, with a somewhat mucous expectoration, and now and then faint streaks of blood. The voice is changed, the mucous membrane of the throat is reddened. The writer has observed these symptoms in nine young men who rode the bicycle to excess several times a day. The mouth breathing, the rapidity and the pressure with which large quantities of air are forced into the larynx and lungs are the cause. In all cases avoiding of the cause was followed by rapid recovery.

INJURIOUS EFFECT OF THE TELEPHONE UPON HEARING.

Gellé, of Paris, observes that those who frequently use the telephone sometimes present a series of aural disturbances similar to those resulting from the continued action of loud noises. In such cases there may be found inflammation of the membrana tympani and of the tympanic cavity, or there may be irritable conditions of the nervous apparatus of the ear, exercising an influence upon the general nervous system. Hence in the cases observed, there were pains in the ear, diminished hearing, subjective noise, hyperæsthesia

acoustica, and vertigo, all of which were manifested at first during loud auditory impressions, but later became permanent, with general nervous irritability. Probably, for the production of the aforesaid disturbances, there must be a certain predisposition, due either to a greater excitability of the entire nervous system or a previous and still existing disease of the auditory organ.—*Annals des Maladies de l'Oreille*, No. 12.—*Amer. Jour. Med. Sci.*

NEWS AND MISCELLANY.

THE NEW FRENCH MEDICAL LAW.

The progress of the *projet de loi* relative to the practice of medicine in France has been so much interrupted by changes of Ministry and minor political complications that it is hardly surprising if even "official persons" (to use a favorite phrase of Carlyle's) in this country are in some perplexity as to the exact situation of affairs at present. In view of inquiries which have been addressed to us on the subject, we thought it well, in the absence of authentic official information, to apply direct to Professor Cornil, who, as a member of the French Senate and author of the elaborate report on the Bill, a summary of which was recently given in the *British Medical Journal*, is the highest authority on the subject. M. Cornil has favored us with a reply, of which the following is a translation: "The Bill as to the practice of medicine, passed by the Senate, was sent back to the Chamber of Deputies because the Senate had introduced several modifications into the text as passed by the Chamber. I hope it will soon come back to us in the Senate, unless the Chamber allows it to pass just as we sent it to them." It is at least clear from this somewhat Delphic utterance that the *projet* has not yet accomplished its final development into law. We believe, however, that the Chamber has already passed the first clause of the Bill, which is the one which chiefly concerns foreign practitioners. It may be taken for granted, therefore, that the lower grade of *officier de santé* is doomed, and that henceforth all persons wishing to practice medicine in France must possess the diploma of Doctor granted after examination before a French Medical Faculty. Exemptions from certain parts of the earlier examinations may be made in the case of foreign qualified practitioners, but in all cases the three final examinations must be passed in full.—*Brit. Med. Jour.*

HEREDITARY TRANSMISSION OF MUTILATIONS.

Upon the subject of hereditary transmission of mutilations, some interesting observations have recently been recorded by Dr. C. G. Lockwood, of New York. He says: "I selected a pair of white mice on account of their rapid breeding. I bred them in and in for ninety-six generations, as they breed every thirty days, and when they are thirty days old they are able to reproduce themselves. I destroyed all sickly and defective ones by breeding only the fittest. I bred all disease out of them and had a pure-blooded animal, larger and finer in every way than the original pair. In breeding their tails off, I selected a pair and put them in a cage by themselves, and when they had young I took the young and clipped their tails off. When old enough to breed I selected a pair from the young and bred them together; and when they had young I clipped their tails. I continued this breeding in and in clipping each generation and selecting a pair of the last young each time, in seven generations. Some of the young came without tails, until I got a perfect breed of tailless mice. I then took one with a tail and one without a tail, and bred them together, and by changing the sex each time—a male without a tail, a female with a tail, and next a female without a tail and a male with a tail—I was finally rewarded with all-tail mice." So far as they go, these experiments appear to be conclusive of the hereditary transmission of mutilations, but more evidence is greatly needed upon the subject.—*Med. Press.*

PRIZE ESSAYS.—ON THE ACTION OF ALCOHOL AND ITS VALUE IN DISEASE.

The American Medical Temperance Association, through the kindness of J. H. Kellogg, M. D., of Battle Creek, Mich., offers the following prizes:

1st. One hundred dollars for the best essay "*On the Physical Action of Alcohol, based on Original Research and Experiment.*"

2d. One hundred dollars for the best essay "*On the Non-Alcoholic Treatment of Disease.*"

These essays must be sent to the Secretary of the Committee, Dr. Crothers, Hartford, Conn., on or before May 1, 1893. They should be in type writing, with the author's name in a sealed envelope, with motto to distinguish it. The report of the committee will be announced at the annual meeting at Milwaukee, Wis., in June, 1893, and the successful essays read.

These essays will be the property of the Association and will be published at the discretion of the committee. All essays are to be scientific, aud without restriction as to length, and limited to physicians of this country.

Address all inquiries to

T. D. Crothers, M D.,
Secretary of Committee,
Hartford, Conn.

OFFICIAL CHANGES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE FOR THE FIVE WEEKS ENDED SEPTEMBER 24, 1892.

Hutton, W. H. H., Surgeon. To proceed to Cape Charles Quarantine for special duty, Aug. 27, 1892. To proceed to Sandy Hook, N. J. for special duty, Sept. 10, 1892. Relieved Sept. 16, 1892.

Hamilton, John B., Surgeon. To report in Washington, D. C.. for special temporary duty, Sept. 2, 1892.

Sawtelle, H. W., Surgeon. Detailed for special duty as quarantine inspector Canadian frontier, Sept. 5, 1892. To proceed to Sandy Hook, N. J., for special duty, Sept. 16, 1892.

Stoner, G. W., Surgeon. Detailed for special duty as quarantine inspector Michigan ports, Sept. 3, 1892.

Meade, F. W., Surgeon. To proceed to Baltimore, Md., on special duty, Sept. 24, 1892.

Banks, C. E., Passed Asst. Surgeon. To proceed to Washington, D. C., for special duty, Aug. 26, 1892. To rejoin station Sept. 8, 1892. To proceed to Washington, D. C,, for special duty, Sept. 22, 1892.

Devan, S. C., Passed Asst. Surgeon. To proceed to Delaware Breakwater Quarantine for special duty, Aug. 28, 1892.

Kalloch, P. C., Passed Asst. Surgeon. To proceed to Portland, Me., for temporary duty Aug. 26, 1892. Detailed for special duty as quarantine inspector Maine ports, Sept. 8, 1892. To proceed to Washington, D. C., for special duty, Sept. 15, 1892. To proceed to Portland, Me., for temporary duty, Sept. 22, 1892.

Wasdin, Eugene, Passed Asst. Surgeon. To proceed to Sandy Hook, N. J., for special duty, Sept. 13, 1892.

White, J. H., Passed Asst. Surgeon. To proceed to Way Cross, Ga., for special duty, Sept. 19, 1892.

Kinyoun, J. J., Passed Asst. Surgeon. To proceed to Baltimore, Md., on special duty, Aug. 27, 1892. To proceed to Philadelphia, Pa., on special duty, Sept. 1892. To proceed to New York, N. Y., on special duty, Sept. 21, 1892.

Cobb, J. O., Passed Asst. Surgeon. To proceed to Sandy Hook, N. J., for special duty, Sept. 19, 1892.

Stoner, J. B., Passed Asst. Surgeon. To proceed to Sandy Hook, N. J., for special duty, September 13, 1892.

Wertenbaker, C. P., Passed Asst. Surgeon. To rejoin station (Chicago,) Aug. 28, 1892.

Perry, J. C., Asst. Surgeon. To proceed to Norfolk, Va., for temporary duty, Aug. 27, 1892. To proceed to Cape Charles Quarantine for special duty, Sept. 8, 1892.

Simpson, W. G., Asst. Surgeon. To proceed to Delaware Breakwater Quarantine for special duty, Sept. 2, 1892.

Rosenau, M. J., Asst, Surgeon. To proceed to Cape Charles Quarantine for special duty, Sept. 10, 1892.

Cofer, L. E., Asst. Surgeon. Granted leave of absence for sixty days on account of sickness, Sept. 2, 1892.

Stewart. W. J. S., Asst. Surgeon. To proceed to Charleston, S. C., for temporary duty, Aug. 26, 1892. To rejoin station (New York,) September 2, 1892.

Strayer, Edgar, Asst. Surgeon. Assigned to temporary duty at Boston, Mass., Sept. 6, 1892.

PROMOTION.

Geddings, H. D., Commissioned as Passed Assistant Surgeon, Sept. 2, 1892.

Wertenbaker, C. P., Commissioned as Passed Assistant Surgeon, Sept. 2, 1892.

APPOINTMENT.

Strayer, Edgar, M. D., of Pennsylvania, Commissioned Assistant Surgeon, Sept. 2, 1892.

OFFICIAL CHANGES IN MEDICAL DEPARTMENT U. S. A. FROM SEPT. 25, 1892, TO OCT. 1, 1892.

Captain Edgar A. Means, Assistant Surgeon U. S. Army is relieved from further duty with the Commission appointed for the location and marking of the boundary between Mexico and the United States, and will without delay proceed from El Paso, Texas, to Fort Clark, Texas, and report in person for duty to the commanding officer of that post.

Major Robert H. White, Surgeon U. S Army, granted leave of absence for two (2) months, to take effect during October 1892.

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THE
MEDICAL AND SURGICAL REPORTER.

No. 1859. PHILADELPHIA, OCTOBER 15, 1892. Vol. LXVII—No. 16.

Clinical Lectures.

DEFORMITY OF KNEE PRODUCED BY RHEUMATOIDAL ARTHRITIS—OPEN WOUND SECTION OF TENDONS AND FORCIBLE STRAIGHTENING.*

H. AUGUSTUS WILSON, M. D.,
CLINICAL LECTURER ON ORTHOPEDIC SURGERY IN THE JEFFERSON MEDICAL COLLEGE, PROFESSOR OF ORTHOPEDIC SURGERY IN THE PHILADELPHIA POLYCLINIC.

Gentlemen:—The first case I bring before you this morning is the one I had before you at the end of our last clinic, the patient with a contraction at a right-angle of the knee joint, due as you will remember to rheumatoidal arthritis. You will also remember that I explained at that time why I did not then operate, namely, on account of the premature appearance of menstruation. On Saturday last I performed the operation, the menstruation having ceased, proceeding by vertical open incision to avoid cutting the external popliteal nerve which lies close to the biceps tendons. Through the incision the nerve stood out prominently exactly in the track of the knife, so that I could hardly have avoided cutting it had I adopted the subcutaneous method. It was directly in contact with the biceps tendon. I divided the tendon of the semi-membranosis and semi-tendinosis subcutaneously as there was not a similar danger. As soon as these contracted structures were divided considerable exertion was required to place the knee in a straight extended position. I then applied a plaster of Paris dressing from the foot to the knee and another application from the knee to the hip and when these had hardened I applied the connecting iron side bars and covered the ends of them with more of the plaster of Paris. This makes a rigid apparatus leaving a space of about four inches around the knee so as to provide for the application of the dressings. The patient has had but very little pain since. Her temperature has remained practically normal. There was at first a rise to a point near 100° which is usual after any operation; then there was almost a complete subsidence of fever. The patient will remain in the position in which she now is until the wound has healed and there are no signs of inflammation; steel braces will then be applied to maintain the position now held to prevent any yielding of the knee upon use, until a firm ankylosis takes place, when all apparatus will be dispensed with.

*Delivered at the Jefferson Medical College Hospital.

EXTENSIVE TUBERCULAR DEPOSITS—EVACUATION OF A HIP ABSCESS.

I am very desirous always to show you results, and I would far rather show you the unfortunate than the good results, because in this branch of surgery the results are not always the brilliant ones seen in other branches of surgery because of the difficulty of eradicating the cause, namely, tuberculosis. This patient has been presented to you before. The trouble began as a tubercular caries of the lumbar and dorsal vertebræ, with a secondary involvement of the hip-joint requiring an incision of the joint, and subsequently the incision of another portion of the femur, and again, by Professor Forbes, the removal of another portion of necrosed bone. With drainage applied the sinuses closed after these operations which were necessarily

incomplete because of the impossibility of removing all of the diseased bone. Unfortunately, however, this case is an example of the results of those cases where operative procedures were resorted to too late. You will remember the large sinus just above Poupart's ligament which extended into the pelvis and thence in direct communication with the hip joint. The abscess on the side of the trochanter did very nicely, but on Tuesday last I recognized fluctuation and redness extending almost to the knee-joint. I bring the case before you this morning to open this abscess and afford increased drainage. This illustrates the course many of these cases are apt to run. There is an invasion of almost every part of this child's body with the tubercle bacillus, and the disease is constantly manifesting itself in new places. The question that must arise is: What shall we do here. Amputation at the hip-joint is not justifiable, for even though I should get rid of a large portion of the tuberculous tissue I know that back of this are the diseased lumbar and dorsal vertebræ and the acetabulum is perforated giving exit to pus into the pelvis. I must therefore resort to a more conservative form of treatment and hope, for there is hope, that the child will recover. The time is past when we can say that even in so desperate a condition as this one such a case is hopeless. I shall secure drainage and endeavor to keep the parts aseptic by washing the cavity out with peroxide of hydrogen and injecting with the iodoform emulsion. Observe this long cicatrix upon the side, and note how thoroughly the wound has healed, all due to the most absolute antisepsis and asepsis. The point of incision here shall be in the median line of the thigh away from the line of the femoral artery and at the point where the fluctuation is most marked. This is a trifling operation, but it is an illustration of what must be done in these tubercular cases. Wherever pus be found, I care not what it is, whether the old fashioned "laudable pus" the existence of which is now no longer recognized, or whatever its source may be, the proper thing to do is to get rid of it by free incision, and afford drainage.

The aspirator so frequently resorted to but a few years ago is rapidly taking its deserved place in the museum of curiosities or when used at all is used for diagnosis of obscure cases.

The freedom with which exploratory incision may be made renders the use of an aspirator even for diagnostic purposes unnecessary, or at best of doubtful efficiency.

One of the principal objections to its use in the evacuation of an abcess lies in the mechanical impossibility of all the material passing through the trocar, and of the unsatisfactory manner of injection of remedial agents when it is employed.

The withdrawal of the mere fluid part only is not conducive to a closure of an abscess cavity and by its use the evacuation of the caseous portions and fibrous detritus can not be accomplished. I am not in the habit of using the aspirator even for diagnostic purposes except on very rare occasions for at the best it can only prove the presence of pus and does not indicate the origin or extent of the accumulation or the cause.

Free incision facilitates complete evacuation, the removal of the exciting cause, and the permanent closure of the cavity, and when done with aseptic precautions is not accompanied with unfavorable conditions.

Having made the incision and evacuated the pus, I shall now proceed to wash out the cavity thoroughly with peroxide of hydrogen to entirely burn out or oxidize the dead tissue that it has access to. I shall then inject a ten per cent. emulsion of iodoform to keep the parts clean and to destroy the germs. The temperature of the child will almost immediately fall one or two degrees. I am not desirous of tracing the sinus by means of a probe or my finger, for I am sure it is not far from, if not in, the hip-joint, and further removal of necrosed bone is impossible. I wish to reiterate one point of great importance, and that is, do not inject the bichloride of mercury solution first, and then the peroxide, for the bichloride of mercury coagulates the albumen and prevents rapid action of the peroxide of hydrogen. Inject the peroxide of hydrogen first, and then the bichloride if you use the latter and then follow with the emulsion of iodoform which is more effective than the powder because it fills up every cavity and renders the recovery more satisfactory. You can see the bubbling of the

peroxide of hydrogen showing that it is proceeding with its destructive work. I shall show the result of this treatment on some future occasion.

RICKETS, BOW-LEGS, KNOCK-KNEE.

I bring before you this morning a class of cases which as yet I have not shown you in this winter's course. I cannot for want of time enter into the pathology of rickets, but I want to tell you something of the subject. I wish to speak of rickets as an element in the production of deformities. This child illustrates a form of rickets that we very often see, namely, bow-legs, called also genu valgum, genu extrorsum and out-knee. Observe first the position of the legs, how they are distorted from the straight line into the position of bow-legs. There is not a deformity in the body that exists as a single deformity, and particularly does this condition of bow-legs show this. The deformity of the legs has produced a deformity of the ankles in the form of talipes valgus. The curvatures of long bones generally begin to show themselves between the ages of three and six years, and they almost invariably occur in badly-nourished children and those who have manifestations of rickets in other parts of the body. It is a most unusual thing not to have an enlargement of the epiphyses of the long bones. This enlargement is well-marked in this patient at the wrists and at the ends of other bones. I shall look for what are called "rosaries" or nodules at the juncture of the ribs with the costal cartilages, and I find them well-marked. Now notice the alteration of the axes at the knee-joints. When the legs are flexed to a right angle the thighs and legs are nearly parallel, but if I extend the leg the bowing occurs. The bowing is due in part to an unnatural obliquity of the condyles of the femur. When the head of the tibia is thrown under the posterior surface of the condyles no deformity is apparent, but the moment I bring the leg out from that position it is thrown into the deformed position. There is also a condition of bowing present which is a particular feature, but is not an essential feature, namely, an enlargement of the epiphyses of the bones. Notice now the condition of the ankle-joint. The enlargement here is marked. If I were to examine the cranium I should doubtless find some other point of view. I shall now ask you to notice the clinical phenomena in these other cases.

RACHITIC ANTERIOR BOW OF TIBIA.

On the left leg of this little girl you will observe a manifestation of a different character. There is an anterior bowing of the crest of the tibia on this side. The right leg is almost straight and natural in appearance. When the child first came to the hospital it was in a condition of very pronounced bow-leg but under proper mechanical and therapeutic treatment this has disappeared leaving only the present anterior bow of the tibia. The obliquity of the knee has entirely disappeared. This anterior bowing is one of the most unsatisfactory conditions to deal with because it is impossible to put any pressure on this crest without producing suffering and cutting through of the tissues. The sharp knife-like crest of the tibia has no covering of soft tissues except the skin and pressure upon this sufficient to be effective in correcting the curvature will inevitably produce slough, and therefore mechanical treatment is not to be considered.

KNOCK-KNEE.

Now observe another case. Here is a condition of approaching knock-knee known also by the names genu varum, genu introrsum, etc., in knee. It is only beginning, but it is therefore a proper time to prevent the progress of deformity. Notice especially the position of the left foot which is the condition that attracted the attention of the mother and caused the child to be brought here. The enlargement of the condyles is very perceptible, and the beginning deformity though not in a gross form is also very perceptible. The rosaries are to be found here also, and the enlargement of the wrists, In the sitting position the angle of the knee-joint is in the normal position, but you can see a beginning curvature extending from the knee to the ankle. The child has also a slight rachitic curvature of the spine. Also see the pendulous abdomen, which is generally found in these patients. This may be due to an accumulation of flatus, or it may be an associated phenomenon of the disease. The question now is, how are we going to prevent the curving and any increase in the curving. Your teachers who will dwell at length upon this de-

formity inducing disease will tell you that the condition depends on malnutrition, and that the bones are soft from a deficient deposition of lime salts. Then we must administer remedies which produce hardness and the deposition of salts, and, secondly, we must study the application of methods of mechanical restraint. The steel apparatus is preferable for the latter purpose, because it can be adjusted from time to time.

The joints should be placed in the position to favor the mechanical functions of normal joints with pads so arranged as to restrain all bending of the bones. At the lowest joint, the mallelous, for example, in this case of bow legs, we have a support placed, and then above the ankle midway between the ankle and knee at the point of greatest curvature there is a resistance pad and again at the knee is another. This apparatus is applied at first in a position which will do no good merely to accustom the child to wearing it. Then gradually we get it into proper position by adjusting the pressure pads to accomplish the greatest good without being unbearable. It must be kept on day and night to prevent increase of the curvature, being removed only for the necessary washing of the feet and legs and then re-applied. Now, with reference to the deposit of bone salts, various methods have been suggested, but the most satisfactory I have found is the administration of phosphorus $\frac{1}{150}$ grain in one-half teaspoonful of cod-liver oil. This constitutes the best form of treatment for the prevention of the condition and favors the deposit of salts. If it is not well borne the syrup of the iodide of iron or the syrup of hypophosphites may be used. But better still, attention must be paid to the proper nutriment for the child to take. I believe rickets is frequently caused by the use of patented farinaceous foods and when I find that such is the case I always stop that and try to imitate the mother's milk. Children of American parents rarely show rickets. Generally it is found in the children of the Portuguese, Italians and negroes, where the diet of the nursing mother is inadequate to supply proper nutritious milk for the infant. To remedy the nutrition will therefore always be the first step in the prevention of these deformities, in the prevention of their progress as well as in the correction of deformities already existing.

Communications.

AN OBSCURE CASE OF APPENDICITIS MASKED AND COMPLICATED BY OVARIAN ADHESIONS—OPERATION AND RECOVERY.

By GEORGE I. McKELWAY, M. D.,

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Early in June of this year, Marie K., a Swede, came to me with the following history: She was twenty-four years old, single, a ward-maid in a hospital. Until three years ago she was in robust health. About then, however, she began to have excruciating pain in the right ovarian region at her menstrual periods and had, constantly, tenderness there on pressure. About two years ago she consulted a gynæcologist, who found a retroverted uterus and inserted a pessary. She could not retain this, however, because of the pain it caused her, and did not return to his care. She lost flesh, became pale and weak, and unable to work; and in this condition consulted me.

A vaginal examination showed a retroverted uterus bound down by adhesions, and an exceedingly sensitive, adherent mass, the size of a walnut, to the right of and beside the uterus. I took this to be an enlarged ovary itself bound down, and causing the binding down of the uterus, by reason either of an inflammatory condition in it, or in the tube, or both, and advised an abdominal section. To this she consented, and I sent her to the Presbyterian Hospital, where I was at the time substituting for my friend, Dr. E. L. Duer, and operated by coeliotomy on July 9th, 1892.

After getting my fingers into the peritoneal cavity, I found the uterus bound with adhesions, as I expected, and freed it. The left ovary and tube were free and normal. The right ovary, the distal end of the appendix vermiformis and the adhesions about them formed the mass I had felt through the vagina. I carefully freed the ovary and appendix, and brought them and the tube up to the abdominal wound. I carefully separated all adhesions and

found both tube and ovary apparently healthy. The ovary was considerably larger than was the left one.

Examination of the appendix showed it to be very tense, erect, curved, very long and increased in diameter to the size of a large lead pencil. I removed it, and as there seemed to be no condition of the ovary or tube justifying their excision, they were not disturbed. The abdomen was closed without irrigation or drainage and the patient made an uneventful recovery.

The removed appendix showed no perceptible evidence of leakage or rupture. It was five and three quarter inches long, and its mucus surface was highly congested. It contained no pus, but did contain two fecal concretions the size and shape of a grain of wheat. It ruptured, on handling, at about its fourth inch, at the place where the fecal concretions were.

The patient is apparently well. She has gained flesh and has menstruated twice since the operation with very little discomfort. A vaginal examination shows her uterus to be in normal position, and reveals neither the pre-existing mass nor the exquisite pain on the right side she formerly suffered when examined. She believes herself well.

The case is interesting because, as I believe, the condition of the right ovary and of the uterus was secondary to the inflammatory condition of the appendix, and furthermore, because while pain and tenderness and a tumor were made out in the ovarian region, there had never been complaint or evidence of any of the three where they are generally expected in appendicitis, i. e., about McBurney's point. There was no history of any thing like an acute attack of peritonitis or appendicitis, and the exacerbations of pain always occurred at her menstrual periods.

It is instructive because of these circumstances and further teaches the oft repeated lesson of the difficulty and, sometimes, impossibility of exact diagnosis of intra-abdominal and intra-pelvic conditions.

Another most important matter is, that despite the fact that the one ovary was enlarged, adherent, and possibly much congested because of its circulation being obstructed by these adhesions, yet her restored health and her freedom from pain up to this time justify me in not having removed it. I believe that its condition and much of her pain was occasioned by its strangulation and that the freeing of it would restore it to its normal state and relieve the patient of any pain caused by it. As I have said, events so far have borne out this theory. Is it not possible that in many more cases the freeing of adherent ovaries may, because of the rehabilitation of their circulation and so their restoration to the possibility of normal performance of function, result in much better things for the patient than their removal? It is not proven that adhesions about an ovary, healthy save for conditions caused by these adhesions, are sufficient reason for its removal and yet we constantly read of an ovary removed, apparently as a matter of course, because "enlarged" or "adherent," and infrequently its sound fellow (may be sister is the better word) is also excised because the other was.

In the operation, and in the subsequent care of the patient I was most intelligently and thoroughly assisted by Dr. J. H. Girvin, then a resident physician in the hospital, to whom my thanks are due.

WINTER COUGH AND NOSE OBSTRUCTION.

Mayo Collier says (*Lancet*) that the frequency of chronic winter cough, laryngeal catarrh and cold in the head is unfortunately, in this country, Europe and America, notorious. He has recently shown from the examination of over 1,000 living and 5,000 dried skulls that some irregularity of the nasal septum, causing more or less obstruction to nasal respirations, is a constant feature of nine out of every ten persons living in those countries. Facts are steadily accumulating, and the conviction is becoming established with many who are competent to judge "that chronic winter cough, laryngeal catarrh and post-nasal catarrh, with all their consequences, are in a majority of cases the direct result of breathing unfiltered, cold and dry air that has not passed through the proper respiratory gate." This proposition can only be refuted by the evidence to the contrary, and established by showing that every person suffering from winter cough or laryngeal catarrh or a majority of these, has some marked obstruction in the nose. This investigation is now proceeding at several centers, and it is with the object of still further directing attention to the subject that he writes.

SUCCESSFUL SURGERY.*

By F. A. DUNSMOOR, M. D.,
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The great reduction in the mortality in surgical operations during the last decade is due to the adoption of the germ theory, and to the fact that there are more experts (and by expert, I mean those who know by touch, sight and location healthy or diseased tissue; when to tear and when to cut, and are competent to face any hæmorrhage; who realize what shock means, and who say *no* to the petitions for the impossible operation). We are also indebted to the better appliances of the present day, and to the greater cleanliness, which is next to Godliness—in surgery, next in advance.

It has been suggested by many that the wonderful success of Tait abroad and Price in Philadelphia impair the value of the germ theory. This reasoning is fallacious; would any practical man declare it to be unnecessary or foolish to lock the door until the night the burglar attempts an entrance? We are not all mind-readers, we *keep* the key turned that the protection may be sure. It is absolutely certain that if no germs of disease are about it is needless to use germicides in any operation.

To grow corn, corn must be planted, when nothing but corn will be produced. Pus will never appear in a wound unless there has been exposure to a pus-producing germ, but where there has been such exposure it is certain to follow as if the patient had been vaccinated.

The germicide is *per se* of no advantage to any clean wound, nature alone supplying every requisite for healing and union, and making astounding cures when allowed by non-interference. It is protection for home industry "out McKinleying McKinley." If the surgeon, assistants, dressings, sponges and patient have about them *no* contagious products it is hardly necessary to try to kill bacteria which may be miles away; but woe to him who relies on this exemption where there may be a possibility of contagion; ill consequences await the most ingenious operator without the competent germicide.

Again it is argued that the great majority of our experts in the vast domain of surgery, using complete antiseptic precaution fail in producing as good results as Dr. Tait or Dr. Price. This must not detract from the value of the antiseptic precaution, for if *anything* be proven in surgery it is that the reproduction of disease, or infection is accomplished by transplanting bacteria; but it is due to other causes, the greatest being the lack of personal ability, mental power and dexterous facility combined with the confidence of the patient, begotten perhaps by the wondrous record and reputation of the operator.

The surgeon may have prepared for every onset of bacteria, but if he be himself incompetent, neither saltpetre nor bichloride of mercury will save him nor his patient from disaster.

The famous operators who get on without germicides, are more particular as to surrounding influences, such as time, place, barometer, filth, fear, hope, assistants, etc., etc.

There are so many risks likely to be overlooked when we let the great light of antiseptic relief satisfy our anxiety, that one must be a great general who meets and successfully combats them all. That time is never wasted which is spent in watching and studying the preparation, manipulation and management, both before and after the operation, of a man of vast experience. We should consider that man as good a seaman who avoided the shoal, as one who piloted his boat through it.

It is vastly better to steer clear of complications than fight them. Courting the patient's confidence is our best evidence of gallantry. Agreeing with superstitious victims as to Fridays and fatal anniversaries, and changing conflicting dates is not weakness but strength; better and easier is it than trying at this period to inculcate in their minds the idea of a higher education.

At an imperative operation the omission to quote to the patient favorable statistics is a blunder, and in contrast to padded results tabled for our own delusion by would-be surgical bombasts.

Experience proves the danger of operating while the barometer is lowering.

Personally I am satisfied that the morning hour is the best for the operation, although advices from abroad make it afternoon.

* Read before the Department of Surgery of the Minnesota State Medical Society, June 16, 1892.

The empty stomach, the night's rest, and especially the waxing resources of the day, which are so much greater than those of the night, commend it to me.

Next to the patient's confidence one's own is of value. The timid operator who delays, who is incomplete (danger lies in what we leave; not what we remove), who continually relies upon associates, upon repeated last looks, like lover's last good byes, who doubts about drainage, etc., etc., immensely damages the successes under contemplation.

We believe it to be far better to have one's own assistant for all operations, and that all compliments, consultations and divisions of responsibility should be made beforehand.

It is necessary first to be a man before one can be a surgeon. The qualifications of the first are multiple enough, and the standard must be to the individual himself satisfactory, but of the latter's equipment considering what he has to meet, no knowledge should be considered too trivial, no dexterity or excellence too great to be obtained.

We deprecate undue haste, but unquestionably the patient is in constant and increasing danger while depressed by anæsthetics, from the necessary or unnecessary exposure, the lowering temperature, from the rapid evaporation from the body's surface, by reason of irrigation and damp covering, and the constant sanguinary depletion, great or little.

The time of such exposure and irrigation of the divided sensory filaments should be shortened as far as possible by the strenuous cultivation of expert manipulation.

As to the question of which precaution may be dropped, the best preparation for success is to employ every one that you would require were you yourself the patient.

And after all is said and done, when one is fully prepared to ensure constant success in surgery, we believe he is one of the most learned men on earth, and his life and work too valuable to be spent on anything else.

PRURITUS ANI ET VULVÆ.

The following salve (*Lo Sperimentale*, No. 16, 1891) is recommended:

℞ Calomel..... .....gms. 5.
Vaseline .....gms. 35.
Apply locally.

FORCED RESPIRATION (FELL METHOD) PER FACE-MASK, AND TRACHEOTOMY IN DIPHTHERIA.—REPORT OF CASE.*

By GEORGE E. FELL, M. D., F. R. M. S.,
OF BUFFALO, N. Y.

The following case is presented with the belief that it has some features of novelty of an interesting character and

1. To illustrate how forced respiration may be of great value in surgical operations associated with conditions of asphyxia.

2. To illustrate its value per face mask and also tracheotomy in cases of membraneous diphtheria and croup.

3. To demonstrate the value of peroxide of hydrogen in asphyxia produced by membraneous exudates in the trachea and bronchi of the lungs.

The history of the case may also prove a valuable lesson to parents with children suffering from throat trouble and who hesitate to call a physician in time.

A resident of Buffalo, whose family consisted of wife and four children, the eldest a daughter nine years of age; a son seven years and three months; a daughter four years, and an infant son two years of age. The eldest daughter was taken ill with throat troubles and general disturbance of the system. She was quite sick and was taken from school. On the 29th of March, 1892, the eldest son was taken sick, and he, like his sister, was treated with home remedies until about 5 a. m. on the Sunday following, June 4, when the father discovered him in a cyanotic condition, breathing with great difficulty, and evidently in great danger. I was called about eight o'clock in the morning, and arrived at the residence an hour later. On examination I found the four children ill with diphtheria, the exudates being quite clearly marked in the eldest daughter and son. The son was respiring with great difficulty, and his life was in immediate danger. I informed the father there was only one thing that could be done at

*Read Before the Section of Surgery and Anatomy, at the Forty-third Annual Meeting of the American Medical Association, held at Detroit, Mich., June, 1892.

that time, and recommended tracheotomy as a means of holding the case, but held out no hope of ultimate recovery of the child. The younger children were also ill, the exudation however not so extensive, as the disease had affected them later than the first two. The mother desired the operation to be made. I sent for Dr. Colton, near by, to assist me, but before we were ready to make the operation the lad became unconscious from the cyanosis, and necessarily in a very desperate condition. He was placed upon a table and the initial incision made for the operation of tracheotomy. The blood was purple. No anæsthetic was used, as it was not necessary. A few moments after the first incision was made Dr. Colton called my attention to the fact that the pupils of the eye were rapidly dilating. I had fortunately prepared my forced respiration apparatus so as to have it ready for immediate use should occasion warrant, and had it not been ready I undoubtedly would have had the experience which very frequently comes to some surgeons, of death occuring during the operation. I immediately placed the forced respiration cup upon the face and respired for the little fellow, resulting in changing the blood to a bright scarlet in the wound in the neck and causing the return of auto-respiration. I proceeded with the operation, and found it necessary, before I completed it, to repeat the respiratory work with the forced respiration apparatus some six or seven times. in some instances having to respire quite a little time before auto-respiration was re-established. This is an unusual and peculiarly interesting fact, associated with the question of interference with respiration through exudates in the respiratory tract, that it is possible (it may be for a short time only) to breathe, retain the life of a patient, overcome the influence of the exudate and tone up the system so as to enable auto-respiration to be carried on. I completed the operation and placed the tracheotomy tube in the trachea,and even then found it necessary before consciousness returned to respire some time for the lad. After becoming conscious he breathed with very little trouble for quite a period of time. The general treatment directed was a spray application, to the throat and nasal passages, of the peroxide of hydrogen, about 30 per cent. aqueous solution. The father was directed to use this in the wound in the neck if found necessary. The afternoon of the day of operation revealed a condition similar to that which existed after the operation in the morning. The boy was moving around the house although the respirations were at all times more or less labored. At intervals the inner tube of the tracheotomy-tube would close up with the exudate and require frequent cleansing. The father stated on my second call that if he had followed my directions to merely spray lightly the wound in the neck, his boy would have died before my return. He found it necessary to place the tube of the spraying apparatus in the opening in the neck, or in the tracheotomy-tube, frequently to prevent the cyanotic condition from ensuing; that the "spray appeared to liquify the membrane, or the mattery substance, and cause it to come away in a foamy, frothy state." During the afternoon the condition of patient became worse, the membranes filling up the trachea apparently, so that Dr. Colton, who was present, applied the forced respiration through the tracheotomy-tube, again relieving the little patient from the severe dyspnœa which prevailed at the time. Sunday night the case progressed about the same, frequent resort having to be made to the peroxide of hydrogen to enable the little fellow to get along at all. On Monday and Tuesday extensive membranous casts were coughed up and passed out of the tracheal opening. The boy retained his vigor under the adverse conditions existing until Tuesday afternoon, when the exudate seemed to be increasing and interfered with the respiratory efforts, which condition could not be overcome, even by the forced respiration-apparatus, and about eleven o'clock Tuesday evening the patient died from exhaustion and heart failure.

The other patients in the house had upon my arrival been placed upon the common method of treatment which I used in these cases, tincture of chloride of iron, chlorate of potash, bichloride solution and so on internally, with the peroxide of hydrogen spray used every ten to fifteen minutes. While the exudates in their cases were very extensive, there appeared to be no serious invasion of the lung tissue and they both made a nice recovery without any serious complications.

It was very clearly evidenced in the case

of the boy that he would have died before I could possibly have performed the operation of tracheotomy had it not been for the forced-respiration apparatus. How many cases of a serious character might be benefited, or have life retained by such work, and tided over the most serious results, cannot be foretold. It is unreasonable to assert that some patients may not recover who are as seriously sick as was this young boy.

Regarding the peroxide of hydrogen, its value was unquestioned. It produced liquefaction of the membranes in the throat; but whether a weaker solution would have proved more satisfactory or not, I am not prepared to state. As mentioned, the solution was about 33 per cent., and this apparently produced no uncomfortable effect when sprayed into the tracheal wound. This treatment appeared grateful to the patient in his distress, as did also the forced-respiration application when it was made. In fact he eagerly requested that it be utilized later in the case, as it had relieved him once or twice. But of course, the difficulty was in the prevention of the exudates, which ultimately prevented the respiratory process from being carried on, weakening the patient so that the heart succumbed to the strain put upon it. I think there is no question from the result of the cases that had this boy been placed in time under the treatment to which the other children were subjected he might have recovered.

This paper is presented to this Section on account of its bearing upon an operation the surgeon must frequently perform, and if through means of this character the surgeon may be prevented from experiencing that most unenviable notoriety of losing a case during an operation it will be worth the time expended.

MORPHINE-VASELINE.

The following formula is proposed as an agreeable and easily absorbed combination:

℞ Chloret. morphic .....gr. iij.
Chloroform. pur.....f℥ij.
Vaseline .....℥j.

The chloroform favors the absorption of a larger amount of the morphine and causes it to be evenly distributed.—*Hospitals-Tidende*, No. 32, 1890.

"COELIOTOMY," VERUS "LAPAROTOMY," AS A SURGICAL TERM.

By ROBERT P. HARRIS, A. M., M. D., PHILADELPHIA.

When you perform an abdominal section, and report the case; under what scientific term do you describe the operation? You probably call it a "Laparotomy," because hundreds of operators are in the habit of using the same word, or its synonym, in a dozen countries and languages.

Where did this term originate? You say it has a Greek derivation (the language of Greece having been the tongue of the first anatomists) and comes from two words, *lapara*; and *tomæ* to cut. Now, what did the Greeks call the *lapara?* It was certainly never the abdomen.

Did you ever look carefully into an ancient Greek anatomy to find out what the abdomen was really called in their language? The word *belly* appears ten times in the English version, of the New Testament; did you ever note that the original Greek has the word *koilia*, and never *lapara* in these ten places?

Rufus, of Ephesus, a distinguished physician and writer, born A. D. 112, wrote a paper entitled "Names of the Parts of the Human Body," in which he has this significant sentence: "The *omphalos* (navel) is the hollow which occupies the middle of the *koilia* where we cut the veins that nourish the fœtus, the middle part of the hollow is the *akromphalon*" (top of the naval.)

"Lapara" is a very old Greek term, and was applied in the time of Hippocrates to the parts between the short ribs and the iliac bone (the flank), and scores of old lexicographers have thus defined it. The operation for lumbar hernia, or laparocele, was a true laparotomy; and so, also, is that of lumbar, or laparo-colotomy. The term *lapara* originally meant a hollow, and was for this reason applied by the early anatomists to *the hollow of the waist*. It was never used to designate a convexity.

The misapplication of the term "laparotomy" commenced in the year 1811 in the medical thesis of a Wittenberg student of the name of Fiedler, who wrote in Latin under the title "De Laparotomia." He had witnessed a true laparotomy performed

on October 17, 1810, upon a man of fifty with a diseased colon, as he lay on his right side. Fiedler wrote again in 1817, and took it upon himself to coin such distortions as "laparo-gastrotomia," "laparoraphia," and "laparo-hysterotomia"—his desire seeming to be to supplant the term "*gaster*," which really meant the belly, by the word "lapara," which a careful investigation would have taught him was not its Greek synonym. The mystery is how an error of this kind ever made the progress that it has in leading the medical world astray.

"*Koilia*" being the Greek word for abdomen, the natural synonym of gastrotomy in its old meaning is "coeliotomy," pronounced soft (se-le-otomy). This is not a new coinage except as to its terminal, for we have long had *coelio-paracentesis* for tapping the abdomen. The term coeliotomy has been adopted by Prof. Sänger, of Leipzig; by Dr. J. Greig Smith, in his *Abdominal Surgery*; by Profs. Keene and White, in their *Text-Book of Surgery*; and by a number of well-known medical writers. This adoption gives us the compound terms *coelio-hysterectomy* (Cæsarean section) *coelio-hysterotomy* (exsection of uterus through the abdomen,) *puerperal coelio-hysterectomy* (Porro-Cæsarean operation), *coelio-nephrectomy* (abdominal exsection of the kidney), etc.

What characterizes the present position of our condemned term is its wonderful tenacity of hold in the nomenclature of gynecological writers who have admitted the error of its application in abdominal surgery. Two years ago I published a classical pamphlet on the subject and sent it to prominent writers in thirty different countries. I also sent a copy to every Fellow of one of our leading national medical societies just before it met in annual session in 1890, and their letters attested its effect upon their sense of reason. It convinced them that *lapara* was not the abdomen and that *koilia* was; but it did not break up the habit of use, as shown by the fact that four papers entitled "laparotomy" appeared in their *Transactions* for 1891, and the term was time and time again made use of throughout the volume, but no one said "coeliotomy" as much as once. The old rut is so easy to run in, and the laparotomy wheel will get in. It took eighty years to propagate the error, and it will take time to correct it.

Selections.

ABORTION—A LANDMARK OF GYNÆCOLGY.

By FRED. BYRON ROBINSON, B. S., M. D.,
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Abortion is the expulsion of a fœtus from the uterus before the fourth month (no doubt the fallopian tube aborts many embryos into the peritoneal cavity when conception occurs near the fimbriated end). To understand the evil effects of abortion, one must analyze the anatomy (structure) and physiology (function) of the organ called the uterus. This organ consists of two parts: (*a*) the uterus and (*b*) the cervix. The function of the uterus is gestation and expulsion. The function of the cervix is protection. The crevix is a guard to the uterus; it is the faithful sentinel that wards off infectious matter from the uterus; it tells the uterus to quiet its troubled action. The cervix is the ante-room of a lodge where the guard strictly demands a password for entrance or exit. It does not share in gestation; it simply mechanically expands step by step with gestation, because the expanding uterus demands it. The cervix differs in structure from the uterus: (*a*) it has a different blood-supply; (*b*) it has a different nerve-supply—sober spinal nerves preponderate in it, while the sympathetic with its periodic rhythms predominates in the uterus; (*c*) its glands differ from the uterus; (*d*) its muscular substance is different. The cervix is generally still; the uterus is generally in a rhythm.

Now, an abortion is bad because it is unnatural, while a labor is natural. The cervix is never prepared far an abortion, while the uterus is always ready to start one.

From what has been said, it may be seen that the dangerous organ in abortion is the cervix. It is dangerous because it will not remain open. As soon as the fœtus is expelled, the cervix contracts and closet up the cavity. With a closed cervix, the tubes act as sewers, and the peritoneum as a sink-hole of infection. Now, the greatest principle in gynæcology is *drainage*; and abortion cannot have good

drainage, as the cervical canal closes the sewer. Then gonorrhœal and various puerperal infections run riot. The woman does not have much, if any, flow—so she gets up and walks around, with her infectious enemy in close communion. Her extra exertions weaken her and bring more blood to the pelvis, which causes more secretions for the germs to thrive in, while the closed crevix allows no escape for the accumulating germs and secretions; these, taking the direction of least resistance, go through the fallopian tubes. The woman never recovers her elastic, juvenile step. It is common talk for a woman to say: "I have never been well since I had a miscarriage."

Now, I claim that, in those cases of abortion in which the woman is an invalid from pelvic disease year after year, the infection is gonorrhœa. In many cases it is the very gonorrhœa (endometritis) that caused the abortion. The gonorrhœa and spermatozoa were put into the woman's vagina at about the same time. Both progressed together until—physiology and pathology conflicted—abortion! Gestation progressed until the excessive rhythmical motion of the uterus conquered the cervix and opened it up.

Abortions frequently render a woman sterile. This is done by: (*a*) altering the tube so it will not transmit an ovum; (*b*) adhesions will not permit the fimbriated end of the tube to apply itself to the ovary; (*c*) the endometrium becomes so diseased that it will not gestate; (*d*) graafian follicles become so diseased that they will not be fructified. The ovary, I have noticed, after such infections becomes degenerated cystically. The whole story of sterility after abortion is: Infection, inflammation, adhesion, and degeneration.

The general practitioner's idea of abortion seems to be of a man shaking an apple tree. If a few apples fall off, there is nothing further to be done but to dispose of the apples. He seems to forget that the main damage is done *to the tree.*

Much is said about criminal abortions in this country. We only know of a criminal abortion because the woman became infected during the process. Many doctors perform abortions on woman for *money* or *pity.* In almost every abortion that I have known of being produced, the woman had more or less infection. The men who do such work are generally rough and unskilled, and do not understand antiseptic or aseptic principles. I saw one case where the physician had torn the vagina and dragged some intestines out of it. He mistook the mesentery for the placenta. She died. Not far from where I lived, a woman thrust an instrument into the abdomen through the vagina, and died. Dr. Thomas reports a case where a woman passed a rib of an umbrella up through the vagina, and it went on through the diaphragm into the lungs; she died from the effects some time later. Even practicing physicians who criminally produce abortion do it very clumsily. A young woman of 24 came to my clinic at the Woman's Hospital; she had had an abortion produced on her by a neighboring physician, and he had actually lacerated the whole depth of the cervix for nearly three-fourths of an inch. A year after, she had a solid bunch of old adhesions on the left side—opposite the side of the laceration. It was presumably salpingitis and cystically degenerated ovary.

The line of pathological progress after an abortion is: (*a*) Endometritis; (*b*) *plus* endosalpingitis; (*c*) *plus* ovaritis; (*d*) *plus* peritonitis; (*e*) *plus* lymphangitis; and (*f*) *plus* phlebitis. Lymphangitis and phlebitis are rarer than endometritis *plus* salpingitis, *plus* ovaritis, and *plus* peritonitis.

I have seen in autopsy the connective tissues in the broad ligament as white as snow, but pyosalpinx existed. Another remarkable fact I wish to record is that I have seen double pyosalpinx with an endometrium which looked absolutely healthy. I have become convinced, of late years, that endosalpingitis in its worst forms can and does exist with a normal endometrium.

The statistics of abortion are very delusive, and so untrustworthy that they are not worth copying. Deaths from abortion are charged to different causes; but many occur, and many women are made invalids for life thereby. The Europeans call criminal abortion the American sin, while the American retorts by saying the European sin is illegitimate births. The American sin is the worst, for it causes a man to attack a defenseless babe which, cabined and confined in its narrow uterine quarters, is totally unable to defend itself. It is cowardly, because there is no bravery in killing innocent and harmless animals.

The *causes* of abortion are very various,

and not always ascertainable or even understood. But we must look for the causes of abortion in: (*a*) the uterus (and mother); (*b*) in the fœtal membranes; and (*c*) in the fœtus itself. In accounting for abortions, one must not forget the patient's previous history. Some predisposing cause has no doubt long existed. The cause of abortion often lies far ahead of the expulsion—the abortion is simply the effect of some old persistent cause. I found many abortions among women of an outdoor, active life, but I think that was due to trauma, for I noticed that as the seasons changed and these woman began a new kind of work numerous abortions followed. I also noted that abortions from trauma or new and excessive bodily exertions passed over frequently with scarcely a trace of infection. One can easily note, in farm life, that, among women who suddenly begin to bind in the harvest field, many have an abortion in a few days (from trauma). Or let the season for digging potatoes arrive—when, especially in German communities, many women work in the field—and some abortions will follow.

The condition of the mother must be examined. I was once called to a woman in labor who had a very distinct attack of measles. When the child was born it was covered with a most intense measle rash. The mother's measles not only precipitated the labor, but infected the child with measles also. Acute infectious disease plays a rôle; also constitutional disease, excitement, or intense emotions (which means that the abdominal brain sends too great an irritation over the hypogastric plexus and creates excessive rhythm in the uterus). Among predisposing causes must be also mentioned the general spreading of catarrhal diseases. Endometritis accounts for many abortions; nor can we overlook diseased kidneys and heart as causative factors.

The fœtal envelopes play a rôle in abortions. The membranes are liable to diseases. The fine chorionic villi which projects from the fœtal ball like fine hairs may enlarge to the size of a hazelnut and make the pathological condition known as hydatids of the chorion. Naturally the small chorionic membrane looks like a shaggy ball of wool. Its surface appears like the pile on velvet. But what a wonderful change occurs when all these fine villi of the chorion swell up and assume the appearance of a bunch of large transparent grapes! Several specimens of chorionic hydatids have been shown in Chicago lately. My friend, Dr. Bailey, showed me a splendid specimen of these hydatids last month, taken from an abortion of four months. In Dr. Baily's case the chorionic villi were club-shaped, there were countless jelly-like transparent cysts covering the chorion. The contents of the hydatids were of a viscid nature. Many of the cysts had very small pedicles. I noted that the cysts were so numerous that the child could not get sufficient nourishment from the most diseased part of the chorion. In this way the normal chorionic villi were transformed into pathological villi (cysts), and the fœtus was starved to death. Indegeneration of chorionic villi the fœtus is starved, and abortion results. In that part of the chorionic villi which persists and forms the decidua serotina, or discordal placenta, of man, I have often found circumscribed patches of hard cicatricial tissue. The salts of calcium are deposited in such diseased points. Such spots may be found on the remains of old limited inflammations, and no doubt such localized inflammations frequently proceed to abortions.

The placenta may be so placed that as the uterus expands it will be torn from the uterine walls and thus cause hæmorrhage, followed by abortion. But it must not be forgotten that the placenta is not very firmly attached to the uterine walls, and slight trauma will often loosen it. I have examined scores of animals, and the wonder to me is how such a weak connection between uterus and placenta can last through gestation without a rupture. The pig's universal placenta peels from the uterine wall with very little pulling. Though the cotyledonous placenta of a cow is more strongly attached to the uterus, yet slight traction destroys the connection. Unumbered abortions arise from the separation of the placenta from the uterus, from mere trauma, *e. g.*, a jog, a misstep, a rough ride, or an active walk.

The amnion may contain an excessive amount of fluid, and abortion result. Reports give as high as seven gallons. I saw a woman in Prof. Braun's clinic with such extensive hydramnios that life became endangered. Prof. Braun placed her under chloroform, dilated the uterus,

and delivered her of twins—which he had previously diagnosed. It is probable she would have aborted in a few days. The uterus may be so rapidly distended by hydramnios or chorionic hydatids as to quickly cause abortion. The amnion may contain too little fluid, and various inflammatory adhesions may result—the cord may adhere to any part of the body; the fingers may become adherent—and abortion follow.

So far as I can see, from the examination of scores of animals in pregnancy, and also from a practice of ten years, in which I have had quite a number of abortions among women, it seems to me than the death of the fœtus is the most frequent cause of abortion. Fœtal death becomes more impressive as a man examines gestation in its early stages in women, or in pigs and cows in the slaughter-houses.

It is a surprising matter that such a delicate thing as an ovum survives in an animal with such varied movements. The beginning fœtus is as soft as jelly, and its structures are as delicate as a spider's web. Active movements are apt to snap its delicate structures, and it will often pass off in *solution*. I noted that great numbers of fœtal pigs, from ¼-inch to ¾-inch long, in the slaughter-house, died from *hæmorrhage*. The smaller the fœtus, the more apt it is to die of hæmorrhage. The hæmorrhage mostly occurred at the end of the umbilical cord or in the abdominal cavity. The little fellow was smothered by blood. Such hæmorrhages constitute a great causative factor in the death of young fœtuses. The hæmorrhages of women have floated many an embryo to an early grave, and even the matron or doctor is none the wiser. Of course, when the embryo dies from being smothered by blood, it becomes a foreign body and is then aborted.

Syphilis is another cause that kills the fœtus, and the result is abortion. This is no doubt the cause of habitual or recurring abortions. The fœtus acquires gummata in its viscera (liver, kidneys, spleen, etc.), and death ensues. The bones of a syphilitic fœtus are very distinct, and a post-mortem in a dead fœtus will tell a physician whether to treat the mother and father for syphilis. It should be remembered that long pre-existing causes should be sought for in abortion, especially in repeated abortions.

The fœtus may also die from any disease of its delicate viscera. I have seen intrauterine peritonitis show very impressive changes at the autopsy. Under the causes of fœtal death would come the torsion of the cord to strangulation; abortion would follow it.

A curious feature I have witnessed many times in the lower animals is that after the death of the fœtus it is not immediately expelled, but *decomposes*, *mummifies*, or is transformed into *adipocere*. I have seen some similar things in women. The best explanation I can offer for such a retained fœtus is *tolerance* of the uterus; yet this is not a very satisfactory explanation. Such fœtuses will remain a very long time in the uterus. In the cases of mummification and adipocere the endometrium often appears healthy and normal. In the case of fœtal decomposition I have often found retained bones sunk deeply into the uterine wall, which was several times its natural thickness. Yet all such animals were fat and had been killed for butcher's meat. The blood-supply of the uterus became lessened, and the innervation-centre did not act normally. In such cases in pigs the uterus would contract so firmly down on the mummified or adipocere pig that the uterus would appear node-like; a bulb-like swelling would appear where a fœtus lay, and between the fœtuses the uterus would contract to a circumference several times smaller than that of the bulb or fœtal node.

An important matter in abortion is to be aware of the *dangers* that it causes. I will place the dangers under a few heads.

The first danger of an abortion is *hæmorrhage*. I have seen many women almost bleed to death from abortion. I lost one from bleeding. And if they did not die from great loss of blood, they were ill for months from want of blood. They lost so much blood that what followed was—mal-nutrition, anæmia, and neurosis, a triumvirate in chronic female disease. So hæmorrhage must be controlled.

The second danger of abortion is *infection*. This infection may be followed by endometritis, salpingitis, ovaritis, partial peritonitis, lymphangitis, cullulitis, and phlebitis; the last five, from infection following abortion, are common diseases.

Then I have had fatal suppurative arthritis following labor.

I have also had fatal embolism following labor. Both arthritis and embolism may follow abortion.

A fifth danger may be the entrance of air into the veins.

Writers of complete works on abortion mention such things as tetanus and uterine hydatids following abortions, but I never saw such a case. I have seen puerperal mania, or melancholia, follow: but it was not very dangerous, except that suicide was attempted.

I have examined a large number of women who have had abortion, and what one finds on examination is the following: on introducing the finger into the vagina, an irregular, boggy swelling on one or both sides of the uterus. In my practice, the swelling has occurred seven times out of ten on the left side. The uterus may be normal in position or generally drawn more to one side than the other. This lateral boggy swelling of the pelvis is found between the uterus and the pelvic brim. After some experience one can usually distinguish the crooked, contorted, nodular tube and the ovary, in a mass of exudate. The more gently the examination is done, the more is discovered. The mass is generally up *toward the fundus*; hence it is probably tubal, and not cellulitis. One generally finds the pelvic peritoneum somewhat thickened on the diseased side. The disease lies mostly on the left side (seven in ten), on account of the dilatation and contraction of the rectum, and also on account of the venous current emptying at right-angles to the renal veins on the left side. The left plexus pampiniformis appeared to me to be larger than the right in nearly forty bodies dissected. If the boggy swelling in the pelvis appears within two weeks after the abortion, and is as large as an egg, it is likely a cellulitic and not a tubal abscess of that size occurs much later.

Women with these pelvic swellings generally have painful menstruation. They have crooked, contorted, and convoluted tubes. From the crooked tubes they have premenstrual pain, or tubal colic, because the diseased tube, hampered by pathological conditions, cannot go through its peristalsis. I have noted that those women have much pain because the *rough*, untutored gynæcological finger has actually irritated the tubes into peristaltic movements; such pain will often last two hours.

Large experience enables one to learn from *resistance* in pelvic examinations. But the young gynæcologist should place the woman on her back, with thighs flexed on the abdomen, and then proceed *gently* and *slowly* with the bimanual pelvic examination. He should examine systematically every region of the pelvis. Though practical gynæcology is hard to learn, because of the lack of teaching clinics for digital examinations, yet much can be learned from a single cadaver in a couple of weeks. The *treatment* of abortions may be summed up in the following:

1. Rest.
2. Drainage.

If one is called to see a woman who considers herself pregnant and has symptoms of aborting, he must satisfy himself by examination on these four points: (1) Has she had *hæmorrhage* from the vagina? (2) Has she had pelvic *pain?* (3) Has she had *vomiting*? (4) Is the *os dilated?*

Hæmorrhage from the vagina is nothing but a symptom, and may pass over. Pain is very delusive, and but little reliance can be placed upon it. Vomiting is of a more suggestive character, because it probably comes from profound disturbance in the ganglia in the uterus; this irritation is carried up to the abdominal brain, where the irritating force is reorganized and then reflected on to the stomach by way of the gastric plexus, and vomiting results. Now, a sign is a distinct clew to the disease; a symptom is only an indication of a pathological condition; hence we say hæmorrhage, pain, and vomiting are mere symptoms. However, if they are combined, *i. e.*, occur together, the presumption is strongly in favor of abortion being present.

But the *dilatation of the os* is the *sign* of abortion; when the os is dilated, the uterine contents are pretty sure to abort sooner or later. Hence digital examination of the os is the only real clew to the condition of the uterus. Under ordinary circumstances, if a woman aborts (traumatism being excluded), it will be close to the climax of a menstrual period. The first thing to do is to put the woman to bed and insist on her remaining there. Very frequently, when the physician arrives the fœtus has passed. But the placenta is still in the uterus. Right here arise two classes of gynæcologists: one class would let it alone—leave it to nature; the other

class would remove it. It is very difficult to decide which course to pursue in each case. Only years of experience will enable a physician to judge for himself. I would say this much from my experience: if one can remove the placental remains aseptically, it is the wisest plan; but if there is any doubt, it is better to leave them alone. Remember that when a woman has a child without having been subjected to digital examinations, she is pretty sure to escape puerperal fever—I have never seen puerperal fever in such a case.

The midwife and the doctor carry puerperal fever. But we will take a case: Dr. A. is called to Mrs. B., who is aborting. What shall he do? If the pulse and temperature remain normal, he had better let her alone in bed, and do nothing, and expect. If fever arises, the best way is to put Mrs. B. to sleep and lift her on a table; then clean out the vagina with $HgCl_2$ 1:000. Now seize the anterior lip of the cervix with a volsela and draw it down, introduce a dilator, and in *not less than* five minutes dilate the os. Be sure to dilate slowly. Introduce the finger and break up some of the placental adhesions. It is possible that a forceps will be required to draw out the fœtus, but the whole thing soon rolls out. Now curette every corner of the uterus, using a dull instrument. The uterus should then be irrigated with hot water, and this will soon make it contract down. After it is thoroughly clean, pass some well-boiled gauze to the fundus, pack the vagina with it, and put the patient to bed. The gauze can be removed in from two to four days. If it be done aseptically, the woman is safe 97 times in 100.

The indications for this kind of treatment in cases of abortion are: (1) High temperature and pulse. (2) Hæmorrhage. (3) Retained placenta.

I have also treated many women expectantly. If the fœtus was passed before I arrived, and some placenta remained, I have many a time left them to nature, and they recovered. I will say that, though a man be never so clean, at an abortion where the patient is infected with gonorrhœa she may yet have a distinct exacerbation of her tubal and pelvic trouble, because the active process of parturition has induced the germs by active feeding to thrive faster and invade new fields through new lesions. One must be just as clean at an abortion as at a laparotomy.

The gynæcologist, when called to a case of abortion with a general practitioner, will likely want to empty and curette the uterus; and that is often what the practitioner, will oppose—he thinks the gynæcologist wants to do too much and show too much "skill" to the family. The general practitioner will often say: "Let her alone; give her a physic and a little medicine, and she will be all right." But one must not allow high pulse and temperature after an abortion to go by without *immediate* invasion of the uterus. The thing to find out, on a visit to a woman who has aborted, is the amount of temperature she has. The pulse is not so good a symptom, as she may have a high pulse from large losses of blood. The only safe place to take temperature is in the rectum. High temperature means infection, and every means should be used to stop it.

Another feature arises in abortion. One is called to a woman aborting, but the event is only known to be surely coming from os-dilatation. She is losing some blood, but the expulsion will not occur for many hours yet, and you are afraid she may lose too much blood in your absence. In such a case the whole vagina should be well packed with cotton balls (well boiled) dipped in a 4-per cent. solution of boracic acid. This will prevent serious hæmorrhage, but will allow the uterus to expel its contents. After 10 to 20 hours the cotton balls can be removed, and likely the fœtus will be in the os or vagina.

Drugs are not of great service in abortions. Ergot would not aid a very great deal in expelling a small piece of retained placenta, and it only acts temporarily.

To properly treat all cases of abortion requires all the skill a man can command.

In discussing abortion (the fourth landmark of gynæcology), I have not attempted to be at all systematic, but have rather dotted down rambling remarks on the subject.—*Med. Age.*

Lemonade for diarrhœa—Hayem: (*Le Bull. Med.* Sept. 21st 1892.)

℞ Acidi Lactici.....10 grammes
Syr. Simp.....200 grammes
Aq. Dest.....800 grammes
M. Dose half glassful.

This is especially recommended for the chronic diarrhœa of adults.—The lactic acid acts as a tonic and germicide.

Society Reports.

THE SURGICAL SOCIETY, OF LOUISVILLE.

Stated Meeting, August 8th, 1892.

The President, Dr. A. M. Cartledge, in the Chair.

RESECTION OF KNEE.

Dr. Jas. Chenoweth: Mr. President, I have a patient to exhibit, who was operated upon (resection) in January, 1891, by Mr. Mayo Robson, of Leeds, England, for tuberculous knee joint. I thought it would be interesting to the members of the Society to see the results of this operation. The patient is five and one-half years of age; had tuberculous disease of the knee joint for a year previous to the operation, and had worn splints constantly; was under treatment in the hospital most of the time. You will observe there is very little shortening of that leg and slight motion in the joint. He still wears a felt dressing. The child is in good health at the present time.

The leg was perfectly straight before operation.

Dr. W. C. Dugan: The question comes up here whether or not we should resect these cases in children. This question has arisen out of the fact that after the operation improperly performed, shortening was permanent. This question has been discussed a great deal of late years, some objections being raised to the operation, but I am sure in this case there will be no shortening, that is, there will be no more than after the operation in an adult, since there was no interference with the epiphysial cartilage. Shortening, or, rather, a failure of the bone to grow in length, is invaribly the result of injury to the epiphysial cartilages—an accident which should rarely, if ever occur; so I take it that the objections are without any real foundation, and should never be arrayed against this operation, which, in my judgment, is a good one for certain cases. I think, however, that the leg is a little too much at an angle in this case.

REPORT OF CASE—RESECTION OF KNEE JOINT.

Dr. W. L. Rodman: Mr. President—This is the patient I hoped to have had present at the last meeting of this Society, but, as stated at the time, he was ill and could not come. I wished particularly to exhibit the patient at our previous meeting as a companion case to the one Dr. Dugan presented.

A year ago last March, while working on the roof of a house, this young man fell some distance and struck his knee. After being taken home he noticed that there was a small indentation in the skin, as if it might have been made with the point of a nail, but he was satisfied that the nail had not penetrated the joint; it did not feel as if there was anything in the joint. He told his family physician that he was quite certain it had only gone through the skin. A very severe synovitis developed two or three days after the accident and the physician in attendance attributed it to the blow—just to the external traumatism. I was called to see the patient five or six days after the accident and we were still able to see a little opening in the skin. I found he had temperature of 102° or 103° F.; tongue very much furred; suffering great pain; joint was very much distended: the skin over the joint was very glistening, and the patient perspired profusely. I was satisfied that suppuration in the joint had taken place; I believed, also, that severe synovitis as he had at the time would not have resulted from external traumatism. I thought that the nail must have entered the joint, although the patient and his physician did not think so. As there was evidently a good deal of pus in the joint, I insisted upon doing an arthrotomy, believing this to be best thing for him, even if there was no foreign body in the joint. I made a very free incision in the joint, and at once came in contact with a rusty nail, without head, two inches long. I then made an incision in the other side of the joint, putting in two large drainage tubes, and irrigated the joint with chloride of zinc 1 to 500. This was practiced daily for two weeks, and I then removed the tubes. About ten days, I think, after he was hurt, erysipelas developed on his thigh, extending from the knee joint up to the hip. You will notice a number of scars along the front and lateral aspect of the thigh where I made incision in a number of places and evacuated pus. The cellular tissue of the thigh was almost entirely destroyed by suppuration; many pieces several inches long were removed at different

times. He had a very severe attack of erysipelas, and was laid up on that account for about two months. For the last fifteen months he has had about as good use of his leg as ever he had. The motion is not quite as good as it was six months ago, owing to his having hurt his knee recently, still, you will see the motion is very good indeed. He is able to work, and has been working ever since a short time after the operation, and walks about as well as he ever did, having just as good use of his leg as before the injury.

Case No. 2:—This young man probably some of you will remember was shown at a meeting of this Society some time since at the Pendennis Club. He came to me from Trimble County (Kentucky) with a badly deformed knee, the result of suppurative synovitis of the left knee joint, which was caused by an axe wound into the joint. The suppurative synovitis which was opened at several different points by the physician in attendance, and which opened itself at several other points, left the knee badly ankylosed. The leg was so completely flexed that the calf almost touched the thigh, as you will remember. It was really painful to see him walk. The ankylosis was bony, there being no motion in the joint at all. I put him under chloroform to test this, and there was not the slightest mobility. I sent the patient to the Norton Infirmary, and, after preparing him for operation, decided that the best operation would be a modification of the Rhea-Barton operation. I think this operation better than any other, although I did not do any of the regulation operations. After washing him thoroughly and keeping his leg wrapped in gauze for twenty-four hours, I made a semi-lunar incision extending from the internal to the external condyle of the femur. I removed the patella first and then removed a wedge-shaped piece from the lower end of the femur just above the joint, but, instead of cutting only partially through the femur as Barton did, I went all the way through. After doing this, on account of the deformity which had lasted for five years, the tendons were very much contracted, and the normal relation of the parts was so much disturbed, that instead of doing subcutaneous tenotomies, I made five or six by cutting from without. I preferred this to the subcutaneous method, as the normal relations of parts were so disturbed. There was a great deal of bleeding from the sawn surfaces of the femur, and this bleeding continued to such an extent after the dressings were put on that it saturated everything, even the plaster on the outside. This caused me to change the dressings a little sooner than I otherwise would have done. I think they were changed on the sixth or seventh day; the temperature had not raised in the meantime to above 100°F. and that was on the second day after the operation, there was a little odor to the discharges and I thought it safe to change the dressings at the end of a week. I found no suppuration at that time; it did, however, suppurate afterward at several superficial points —stitch abscesses. Several of us thought at the time that perhaps the leg was not quite as straight as it ought to have been, but the position now as you will see is about right; in fact, I think it is in an ideal position, fully as straight as it should be. He has not used his leg very much yet, but I think now everything promises to be favorable. The scars which will be observed on his leg were there before the operation, as a result of the suppurative synovitis.

Dr. E. R. Palmer: Can this man walk on his leg at all?

Dr. W. L. Rodman: He has not tried it yet. I did not want him to walk on it until it had thoroughly healed; he will begin to walk very soon.

I wish to further state in regard to this case, that I did not remove the articular end of the femur. Barton's operation is to remove a wedge-shaped portion of the lower end of the femur, but he does not go into the joint. I removed the patella and a large wedge from the lower end of the femur. I think he will have as perfect a leg as we could possibly expect in a case of that kind. I kept a ten pound weight on the leg for about six weeks, which evidently straightened it and put it in better position than it otherwise would have been.

LACERATED PERINEUM.

Dr. A. E. Cartledge: In lieu of a prepared paper, I wish to refer to what to many seems a hackneyed subject. Several years ago the journals and reports of medical societies teemed with the best methods of operation, and the conditions demanding operation, in lacerations of the perineum. As some excuse for my re-

marks upon this subject, I will say that there has been a temporary suspension of hostilities in this direction, within the last few months. I have no original operation to offer, nor can I add anything to what has been said of the importance of the perineal body as a means of support to the uterus, bladder and rectum. In brief, I would say that I think we can well afford in a practical way to look upon rectocele, and cystocele, when occurring before the menopause as results of either subcutaneous or open rupture of the perineal muscles; hence the only logical operation for these conditions is a restoration of the perineal body. We are all aware that many cases of so-called endometritis, cervicitis, uterine engorgement, etc., that are daily treated in the offices of physicians by local applications, are only temporarily relieved and must be permanently cured by a restoration of the perineum.

What I desire to say in regard to the operation is this: After a careful study of the various operations, and the practical application of several of them, I am convinced that no operation so far perfectly meets the requirements in this condition. The importance of uniting the deeper structures, which was first brought out in America, is the greatest advance of any step in the operation. A combination of the ingenious method of Tait which so thoroughly preserves all tissue in a place where this is important, with the subcutaneous union of the deep structures by the buried suture, seems to come nearer fulfilling the indications than by any other method of operation.

In recent cases, after making preliminary incisions by the Emmett and Tait method, I have thoroughly dissected the deeper perineal structures, and while I do not claim to be able to bring in apposition individual torn muscular fibres as some writers have, the deep muscular structures are thoroughly united by catgut, working up from the bottom and closing up to the skin margin. This is accomplished by a continuous or crossed suture. The finishing part of the operation is made by the introduction through the skin, traversing the entire pre-sutured area, with silk-worm gut sutures, these acting as a brace or support for the subcutaneous catgut suture, which I deem insufficient as they will probably soften and give too soon.

The result of this combination is a thorough restoration of the perineum, giving for the depressed, concaved appearance a full, strong, pouting perineal body.

DISCUSSION.

Mr. W. C. Dugan: I would like to suggest another method of suture for laceration of the perineum, that is, use a suture with a needle attached to both ends, beginning at the bottom of this V. shaped cavity, then crossing them and secure them on the sides of the cavity, then crossing and still higher secure them and so on crossing and fixing them half a dozen times, instead of tying them, and then finally bring them out and make one knot on the surface instead of half a dozen. I have enjoyed the paper very much indeed.

Dr. E. R. Palmer: A point in the physiological aspect of the question: The statements made bring to my mind three cases in which rupture of the perineum destroyed the capability of sexual orgasm in the women. One of these cases was operated upon very successfully by Dr. Anderson, and I learned afterward that sexual capacity was fully restored as a result of the operation.

Dr. Turner Anderson: I am obliged to Dr. Cartledge for bringing this subject before the surgical society. I want first to say a few words in regard to the operation as it is commonly performed: It is hardly necessary for me to say anything about the advisability of primary operation. Wherever the perineum is lacerated it is desirable that a perfect coaptation as possible should be obtained. All laceration of the perineum should be operated upon, and the operation ought to be done as soon as possible, for the reason that if the first operation is not entirely satisfactory, it will give something to build upon and be of material assistance in a subsequent operation.

I would like to have heard the essayist speak upon the subject divided; that is, complete laceration, and partial laceration. In the incomplete lacerations, the operation of Tait is very satisfactory, provided we make the incision deep enough. In my operations I use silk worm gut as suture, the procedure being a modification of the Tait operation.

Dr. A. M. Vance: With a laceration say two and one-half inches into the bowel, I do not see how a good result could be ob-

tained without suturing the gut separately down to the sphincter fibres.

Dr. J. G. Cecil: The question under discussion is one of especial interest; I consider it a very important subject from a surgical standpoint, because I believe that a successful perineal operation is one of the most difficult operations in surgery. Of course it is not surrounded with the immediate dangers on the table that we encounter in many other cases; not followed by the shock and other evidences that mark greater operations, but the successful coaptation of these ruptured structures with results which will show an improved condition, relieving the symptoms which have been prevailing since the accident, constitutes to my mind one of the difficult operations in surgery.

I believe that much of the discredit thrown upon Emmett's operation arises from the fact that it has been done by operators who have paid more attention to the skin than to the restoration of the ruptured muscles. Further, I think many operations for the relief of this condition have been unsuccessful because of a misconception in regard to what is called the "Perineal Body." Strictly speaking, there is no such thing as the perineal body. It is no more nor less than a muscular structure; you can dissect that structure as much as you please, and you can never separate that body which is called the "Perineal Body." It is simply the junction of these muscles, and when operations have been done to restore this torn perineal body, a space is looked upon, or, rather, a torn space, and the conclusion is that if this torn surface is renewed, the perineal body is restored; whereas, the ruptured muscles have retracted, their torn ends are not uncovered by the dissection, and consequently never reunited. I think many of the illustrations or sectional views showing the perineal body are entirely erroneous.

I, of course, agree with what has been said as to the necessity of these operations, and the symptoms which have been outlined by the essayist are those which are common, and failure to relieve those symptoms, is simply failing to get the proper conception of what is necessary in this operation.

Not long ago in another medical society, this subject was under discussion, and I remember one speaker, especially, who could not understand how it was that a pessary would restore the perineal floor in such a way as to maintain a retroverted womb; he then went on to detail his own treatment or management of these cases, in which he brought out his method of replacing the womb, then packing the vaginal space posterior to the cervix holding the womb up in that way until he could get a satisfactory pessary to hold it up. Now, the operation as detailed by Dr. Cartledge takes the place exactly of the cotton and pessary and so I pointed it out to the gentleman in question at the time.

In these cases the natural support of of the womb is torn away, and the only thing is to restore it; that is, restore these ruptured muscles and connective tissue in that region. The methods of doing the operation are so many and are so complicated that I must admit I have often been confused very much by looking at the pictures in the text-books. They all suggest methods of suturing, with sketches, etc., all of which looks very nicely on paper, but are difficult to understand. The description given by Dr. Cartledge seems to be the most satisfactory method; simply uncovering, bringing forward and suturing the parts which have been ruptured and separated, building up the pelvic floor by continued lines of suture. In doing this operation I think catgut preferable because it will be absorbed; it should be re-inforced by strong sutures running through the skin.

Dr. A. M. Cartledge: I simply want to say in reply that this paper does not intend to offer an entirely original operation for the restoration of the perineum. After carefully performing the various operations employed by the different men in this affection, I have attempted to combine what I believed was the best principles of each. If I had to confine myself to the method of operation of any one man, I should give preference to that of Marcy; that is to say, the use of the buried suture alone, after thoroughly exposing the torn deeper perineal structures. However, I have thought in many cases that owing to the softening of animal suture as early as the seventh or eighth day, some additional means of support or apposition would be of advantage. To this end I supplement the buried suture of Marcy with an external silk-worm gut

suture passing this in the usual manner, traversing the already apposed deeper structures, thus acting as a brace to the subcutaneous or buried suture of gut. Certainly my results so far have been better by this method than by the single method of Tait, the older method of Emmett, or the method of Marcy alone.

AMPUTATION OF LEG.

Dr. A. M. Vance: I have one case that I would like to report: I was recently called to the Sts. Mary and Elizabeth Hospital to see a man sixty years of age, who, about six or seven months ago, sustained a compound comminuted fracture of the leg. Dr. Samuel attended him and wanted to amputate the limb, but the patient would not consent to this, and he attemted conservative measures which were carried out. The fracture united and after the expiration of several months, erysipelas developed, going from the foot to the thigh, numerous abscesses forming along the leg and thigh. The foot suffered greatly, all of the tarsus being involved. The fracture occurred about the middle of the lower third of the tibia. Amputation was advised when I saw the patient in consultation with Dr. Samuel, but he still refused. Finally he consented to amputation, and, assisted by Dr. Dugan, I removed the leg about six inches below the patella. Owing to the man's advanced age, and condition at time of the operation, we hardly hoped to get primary union, the whole limb being very œdematous and the tissues much matted together, more serum than blood exuding when the Esmark bandage was removed. Two rubber drainage tubes were used, which were removed on the third day. I saw the patient day before yesterday and was very much astonished to hear that he would be out in about two weeks. I found as pretty a stump as I have ever seen, absolutely healed by first intention.

I will state that I have never before seen as perfect a result from amputation of a limb in a patient of this age, and especially when the condition of the patient at the time is considered.

Dr. Turner Anderson: I want to ask the members of the surgical society one question, and that is in regard to the propriety of using drainage tubes. It does seem to me that we have arrived at that point in which the amputation of limbs, for instance, can best be done without the use of drainage tubes.

APPENDICITIS.

Dr. W. C. Dugan: Since the last meeting of this society I have had a rather peculiar experience, having seen an unusually large number of cases of appendicitis. I have seen six cases, two died and four of the six were operated upon. One of the cases operated on died, the other one died without operation. The first patient a lady aged about thirty five, was in Indiana; there was a very large tumor most prominent in the postero-lateral aspect of the abdomen; temperature was low, ranging from 99° to 102° F.; patient had been treated for typhoid fever six or eight weeks. The attending physician called in aid, who made a diagnosis of pyonephrosis. I was asked to see the case and after making a careful examination, we concluded that we had a case of appendicitis. We made an incision in the abdomen, and found a circumscribed cavity containing several pints of very offensive pus. We operated through the loin; patient made an uninterrupted recovery.

No. 2. The next patient, a boy about sixteen years of age, I saw in the Southern part of this state. He was taken very suddenly ill with chills and severe pain in the left side of the abdomen near the umbilicus, and other symptoms which led the attending physician to diagnosticate intussusception. The boy grew rapidly worse, with symptoms of colic and complete intestinal obstruction. I saw him on the fourth day. He had had stercoraceous vomiting some time; profuse cold perspiration; in fact was in collapse. We opened the abdomen and removed about a gallon of offensive pus. When the cavity was opened the pus spurted up eighteen inches. The patient died of sepsis on the third day after operation.

No. 3. Another case I saw with Drs. D. T. Smith and Turner Anderson a few days ago; tumor plainly visible. The history of this case extended over two weeks; patient was taken with colicky pains in regions of the umbilicus. Lead colic was suspected inasmuch as he had been painting. The patient was able to be up and around for several days after first visit by Dr. Smith, but in walking assumed a stooping position, favoring right side. Two weeks afterward he was taken worse

and Dr. Smith was again called and for the first time found the enlargement in right side with pain accentuated there; I was then asked to see the case in consultation. Upon examination we found a tumor of considerable size in the caecal region, and extending down into the pelvis; we diagnosticated appendicitis. There was one symptom I desire to call particular attention to, and that is pain in the bladder with frequent micturition, Now, this is not at all uncommon and the explanation is rational. We should not mistake this for cystitis. Dr. Anderson was asked to see the case and he made a very careful examination and said that he had never seen a case where he thought surgical procedure advisable, but thought this was one of the "border line" cases, and if we decided to operate, he would agree with us. After discussing the matter we concluded to wait until the next morning, unless something occurred in the meantime. At nine o'clock the same evening we had another consultation, and decided to send the patient to the Infirmary for operation. The next morning we found the patient very much improved; pulse which had been 130 the day before was 92; tumor had disappeared with the exception of a slight induration, and we were at a loss to explain it until the mother showed us the vesssel which contained about a pint of pus, which patient had passed by the bowel that morning. This is a very important case indeed, and I think we have made a mistake in not operating. I believe that we subjected this boy to very great danger in allowing it to run over. In this case I would not have opened the abdominal cavity until after exploring the subperitoneal space and found the pus to be intraperitoneal. I think in all such cases where the tumor is low down, this precaution should be observed.

No. 4.—Another case I saw a few days ago with Drs. Baker and Bailey; the patient developed symptoms of appendicitis and evidently had a typical case. I was called to consider the surgical aspect of the case with these gentlemen, that is, whether an operation should be performed or not. I found the patient in very good condition, except that there was a great deal of tympany; elevation of temperature slight; pulse nearly normal (84); and expression good. We concluded not to operate since the tympany and other symptoms were becoming less and less marked, but I suggested that the patient be sent to the Infirmary where he could be carefully watched in anticipation of a rupture of the abscess, if one existed. The patient's family agreed to have him sent to the Infirmary, but the next morning when the doctor visited him at seven o'clock, and this early visit was for the express purpose of having him taken to the Infirmary, he found that he had passed a good night; tympany had almost entirely disappeared; so, being so much improved he was not sent out to the Infirmary. He got along well through that day, but sometime during the night was taken suddenly very much worse, went into a collapse and died the next morning at six o'clock.

Dr. A. M. Vance: Up to the time of our last discussion of this subject, in the surgical society, I had never seen a case of appendicitis that I was willing to operate upon, and often wondered why it was we heard of so many operations for this condition in the East, and so few in this section of the country. Since that time I have seen two; one of which I operated upon at the Children's Hospital. The other case I saw in Elizabethtown Kentucky; patient was a young man eighteen years of age; found him in a state of collapse and advised operation at once, but the family refused to allow it with the meagre chances of saving the boy's life that I spoke of. These two cases of appendicitis have come under my observation within the last three weeks, and Dr. Dugan mentions having seen six, every one of which I believe ought to have been operated upon. I believe that every time we can demonstrate the existence of pus, it ought to be let out.

Dr. Turner Anderson: Referring to the third case mentioned by Dr. Dugan: I believe this was a border line case, and I stated at the time if the gentlemen decided to operate I would give my consent; but, at the same time, I remarked that I had seen such cases before and advised delaying the operation until morning.

Now, I do not believe that this was a case of appendicitis at all; I think it was simply a case of rectal abscess, and believe if an operation had been performed without making a rectal examination, a very serious mistake would have been made. The tumor was to my mind too low down

to have been connected with the cæcum.

Dr. W. C. Dugan: I assisted in an operation for this condition a day or two ago, and in this case the tumor was very low down—we were undecided at first whether it was a case of appendicitis or not. When we entered the cavity of the abscess, we found a large amount of pus and some two or more enteroliths, proving beyond all question that it was a case of appendicitis.

I cannot agree with Dr. Anderson concerning the case I saw with him and Dr. Smith. The location of the tumor amounts to nothing. I have seen several cases where there was no tumor to be detected in the iliac region. The appendix is not infrequently prolapsed into the pelvis, and, of course, in such cases the tumor or abscess would be low down. It is my practice in all these cases, to explore the rectum before completing my examination.

WASHING OUT THE STOMACH IN CHLOROSIS.

The *Wiener Klinische Wochenschrift* refers to a communication by Dr. Pick, who publishes the results of some observations he made in Nothnagel's clinic to determine the relation which exists between affections of the stomach and those not infrequent cases of chlorosis in which the leading symptoms are of a gastric character. Some connection between the two has been proved to exist in some cases of pernicious anæmia. The *Wochenschrift* does not consider that Dr. Pick's contribution gives a decided answer to the question, but points out the importance of one result of the experiments. He found, as others have done before him, in all the cases an atonic condition of the stomach, which has not digested the food taken on the previous day, although the patient was fasting at the time of the observation. In these cases Dr. Pick was able to cure the chlorosis quickly by washing out the stomach at stated intervals. In several instances no benefit had been derived previously by treatment with iron. Washing out the stomach prevents abnormal decomposition, which by auto-infection causes the blood dyscrasia. Dr. Pick, with the same object in view, and with equally favorable results, administered creasote when flushing could not be resorted to.—*Lancet.*

BACTERIOLOGICAL NOTES.*

The bacillus coli communis (Escherich) and the bacillus typhi abdominalis (Eberith) identical: Rodet and Roux (*Arch de Med. Exper.* i, 1892, No. 3) have published the results of their further investigations concerning the identity of the bacillus of typhoid fever and the bacillus coli communis. After a large number of inoculation experiments with these bacilli they find that the lesions produced are the same. Rabbits inoculated with these bacilli exhibited the same variation in the temperature, and the development of the experimental disease is the same in both instances. The authors found that there was equally as much variation in the pathogenic effect of one of these forms as in the other when inoculated under different conditions. They feel warranted in concluding from the results obtained that the bacillus of typhoid fever is but a modified form of the bacillus coli communis and that the modification is brought about by pathogenic processes.

[These conclusions are of much interest from a hygienic standpoint and whether or not future investigations will verify them, the facts here recorded are sufficient to cause every practitioner to be zealous to the last degree in urging the correction of bad drainage and other irregularities by which the ordinary intestinal germs may be brought in contact with drinking water or food.]

The virulence of the bacillus coli communis: Lesage and Macaigne (*Arch. de Med. Exper.*, 1892, No. 3) have called attention to some very interesting facts concerning the pathogenic powers of the bacillus coli communis. This organism which is a normal inhabitant of the intestinal canal is found when taken from the healthy intestine to be non-pathogenic excepting when injected in very large doses (more than one cubic centimeter). A diseased condition of the intestine gave to the germ an acquired violence. A diarrhœa produced by a certain drug (tartar emetic) was as effective in rendering the coli germs pathogenic as when its disorder was brought about by other agencies. Under pathogenic conditions this bacillus coli communis acquires its power of penetrating the intestinal wall and at post-mortems

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* Translated for Medical and Surgical Reporter.

they were found in the various organs of the body. This fact was demonstrated in cases of diarrhœa, cholera infantum, cholera morbus and typhoid fever.

In cases of lung trouble (pneumonia and broncho-pneumonia) the bacilli coli were found in the lung tissue. The author considers that the invasion takes place during the death agony.

The fact of practical value is that when these bacteria acquire violence they exhibit pathogenetic powers in varying degrees. Under such conditions they may cause suppuration, septicæmia and inflammation of the serous membranes. [This work like that of Rodet and Roux emphasizes the importance of proper drainage.]

The treatment of experimental tuberculosis by Koch's tuberculin, Hunter's modification and other products of the tubercle-bacillus: Trudeau (*Medical News* Sept. 3, 1892) has contributed to medical knowledge the results of his experiments with Koch's tuberculin. Hunter's modifications, filtered culture-medium and bacterio-protein. Twelve guinea-pigs were inoculated with pure cultures of tubercle-bacilli. Four were kept as controls, the remainder treated with subcutaneous injections of Koch's crude tuberculin beginning with one milligram daily and steadily increasing to one cubic centimeter. Care was necessary in order not to kill the animals with an over-dose during treatment. The animals all died. The controls in an average of eighty-eight days, the others with an average of one hundred and twelve days. This result differs but little from that of a large number of European investigators. He concludes that Koch's tuberculin does not cure experimental tuberculosis in a guinea-pig although its specific influence on the primary lesions is indisputable. His results with Hunter's modifications led to the conclusion that the modification C. B. (Hunter proposed two modifications which he designates merely as B. and C. B. both of which bring about in lupus certain reparative changes tending to cure) contains less of the remedial principle than tuberculin, and is apparently quite as dangerous. Modification B is as efficacious as tuberculin, and free from some of its dangers.

The author's work upon the effect of the filtrate of liquid cultures and the glycerine extract of the washed bacilli is very interesting. His results show that tubercle bacilli (which have been deprived of all culture liquid by washing them in masses on filter paper with tepid water) have, when extracted with 50 per cent. glycerine and water, an injurious effect; when treated with hot alcohol, a doubtful, and, at best, feeble remedial influence over experimental tuberculosis. They produce suppuration and serious constitutional impairment, which may result in organic disease and death. The filtrate of liquid cultures contains the elements that bring about reaction and cure in tuberculous tissue injections of it experimental tuberculosis in a rabbit's eye was cured but the permanency of such a cure has not yet been established.

A simple method of demonstrating the presence of tubercle bacilli in sputum: Kaufmann (*Centralblatt f. Bacteriologie u. Parasitenkunde,* Bd. 11,1892, p. 142) has published a new method for demonstrating the presence of tubercle bacilli in sputum and tissues. Although the number of methods is already very large the author ventures this one on account of its simplicity which renders it of special value for the busy practitioner. The method differs from those of Wilson, Gabbet and others, in the use of boiling water instead of acids for decolorizing the tissue cells and other bacteria. The method is as follows:

Cover-glasses are smeared with a very thin layer of the sputum or suspected material and allowed to dry in the air, after which they are passed three times film upward through the flame of a Bunsen burner or spirit lamp. The film is then covered with carbolfuchsin and heated in the usual manner over a flame or the cover-glass is floated on the surface of the hot staining fluid in a water glass for from 2 to 5 minutes. After staining, the preparation is washed in water heated to from 98-100° C. for from 1-3 minutes. The peparation may be examined at once in water or previously counter-stained as the examiner desires, the tubercle bacilli will be found to be of a deep red and the tissue cells of a grayish-white color. Care must be taken that the film on the cover-glass is very thin. The method is said to be quite as good for sections. The author does not recommend this method for laboratories but for physicians who do not have the facilities for applying the other methods. The method has also been found to work satisfactorily with the bacillus of leprosy. V. A. M.

HEREDITARY INFECTION.

Translated for The Medical and Surgical Reporter by Marie B. Werner, M. D.

Dohrn (*Deutsch. Med. Wochen.* Sept. 15, 1892) in a paper on "The Question of Hereditary Infection," states, that he has been much interested in the communications of Caspary regarding Fournier's writings, which awakened a desire to enter into the consideration of the above question from the obstetrician's standpoint. He admits that his observations may be deficient, but viewing the subject from a different standpoiut than Caspary, he bases his results upon practical and microscopical investigations. Dohrn sees the patients in the last stages of pregnancy, and the first weeks of the puerperium; he sees and watches the new-born child in the early weeks of its life. The information regarding the health of the father may often be very unsatisfactory. The syphilologist has on the other hand the patient under his care a much longer time, and if he happens to be the family physician has an opportunity of knowing more of the previous family history. He, nowever, fails to have the opportunity of observing the newborn child, as well as the study of the placenta and its membranes, upon which Dohrn places great importance. There is also a lack of opportunity to study the products of abortions of syphilitics. He further believes if the line of study was more equal with both, the conclusions would not be so widely different, Caspary emphatically reaffirms the statement of other syphilologists that the placenta is a medium of infection, while Dohrn takes the opposite view with that of other gynecologists and of Krassowitz the syphilologist.

To prove this he advises careful study of the placenta which shows the two distinct sets of blood vessels the maternal and fœtal, both so distinctly separated that it is impossible to have a direct interchange of the blood, and since all studies have led to the fact that it becomes necessary to have immediate contact with the poison, that there is always a previous abrasion of the protecting membrane or integument, the question naturally arises how can infection take place through the dividing membranes; To fortify this statement Dohrn asserts that in leukæmia of the mother the fœtal blood has been found free from the disease. In such cases he found the fœtal side of the placenta diseased, while the maternal portion was healthy; he explains this in the following manner: In large maternities, such material is not meagre, the women having often cohabited with different men; after having first become impregnated from a healthy man, they have been infected by a syphilitic. Such a fœtus remains unaffected by a syphilitic mother because the fecundated ovum was healthy. On the other hand syphilologists claim that a fœtus may be syphilitic while the mother is free from infection; this is explained by Fournier by a minimal absorption of the poison through the placental membranes, thus producing a certain tolerance, minus the primary initial lesions. Dohrn, however, doubts this, and thinks there is but one explanation, the primary lesion must have been overlooked, in the mother which may have existed on cervix or post-vaginal wall. Dohrn closes his remarks with the following conclusions: Syphilis can only becommunicated to the fœtus through the products of conception, the ovum and sperma being of equal importance.

If the ovum is healthy at conception it will remain unaffected by any later infection of the mother. The syphilitic ovum will not infect the mother during intrauterine life.—If the mother becomes syphilitic it will be only by direct infection: he heartily endorses the statement of Krassowitz that the syphilitic poison will not pass the healthy dividing placental membrane either from fœtus to mother or from mother to fœtus.

Cattani, (*Riforma Med.*, 1892, June 21), the assistant of Tizzoni, recommends the use of *antitoxin for tetanus* and calls attention to the unfortunate results of traumatic tetanus. Dupuytren and Cloquet—fifty cases no recoveries, all died. Legonest twenty-three cases with twenty-one deaths. In the United States 360 cases with 336 deaths. In the Italian Hospital (1886 to 1887) there were ninety cases with eighty deaths, in earlier years eighty-six cases with eighty deaths.

Those cases treated with antitoxin were often grave in character, but also chronic continuous but lighter cases were spoken of by the authors as having ended fatally.

Those cases treated in addition with chloral hydrate, the drug was given in too small doses to produce desired effects. In addition to Cattani's and Tizzoni's recoveries, those of the clinic at Innsbruck must be regarded impartially—the fatal case was placed too late under treatment and received two injections, further, antitoxin is not only regarded as infallible, but its use in early stages always tends to give relief. Antitoxin derived from the serum of the guinea-pig can be used with equally good results as that derived from the dog—proved by the good results of an as yet unpublished case. The divergent results of Brieger and Kitasato among animals can be explained by the unequal strength of the fluids used.

AN ANATOMICAL CRITERION TO DISTINGUISH MALE FROM FEMALE SKULLS.

Prof. Virchow declared two years ago that all the alleged modes of differentiation so far recommended were worthless, but Dr. Thiem–Cottbus (*Arch. f. Klinische Chirurgie,* Bd. 37) lately described what seems a satisfactory craniological criterion of sex.

The os tympanicum forms part of the posterior wall of the glenoid cavity of the inferior maxillary, and also closes in front and below the bony meatus of the ear. It arises perpendicularly from the petrous portion of the temporal bone posteriorly, and turns backward, in the woman at about half the height of the mastoid process, but in the man at a less height. In the male, the bone develops a sharp edge, which divides to form the sheath of the styloid process; but in woman this sharpened edge does not exist, the bone is rounded into a tubercular form, and the fossa is shallower and flatter.

Thus, in the male this fossa-tympanico stylo-mastoidea is small, and the posterior wall of the glenoid cavity extends so deep that it is not possible for the condyloid process to slip over it. In the female, it is so much more spacious that this feature alone will serve to distinguish the crania of one sex from the other; and it also explains the surgical fact that luxation backward of the inferior maxillary is observed only in women.—*Science.*

Abstracts.

CALOMEL AS A DIURETIC.

In an article in the *Ohio Medical Journal,* on the above subject Saul Nickles says that the use of calomel as a diuretic, was revived by Jendrassik. Lately, nearly all the works on therapeutics state that calomel has been found to be a powerfull diuretic in dropsy, but their descriptions of the method of using were imperfect. Jendrassik, in a case of dropsy, gave calomel and jalap and found diuresis followed in two days, greatly relieving the patient. This led to other trials with equally good results. In a very severe case of cardiac dropsy digitalis failed to relieve; Jendrassik then gave calomel and jalap, of each four grains twice daily, four grains on second day, two grains on third day and three grains on fourth day.

The quantity of urine increased from thirty ounces to over ten pints, profuse diuresis continuing until dropsy disappeared.

Jendrassik, then used it in twenty-four cases each of which was relieved, polyuria beginning about the second or third day. He found that salivation was not liable to be produced. Jendrassik tried calomel in healthy individuals; stomatitis and salivation resulted, but no increase of urine; Stintzing used calomel in twenty-seven cases of which twenty-three were dropsical. He concludes that calomel acts more powerful than all other diuretics; its diuretic action is manifested slightly in patients without œdema, but in a very high degree, in cases of dropsy.

The effects are found in cardiac dropsy, whether this be the consequence of valvular disease or cardiac degeneration. Ascites, caused by portal obstruction and dropsy caused by chronic parenchymatous nephritis are less amenable to the action of calomel. The incidental effects diarrhœa, salivation and stomatitis may be prevented, or rendered harmless by suitable prophylactic means. The best dosage recommended by Jendrassik is three grains daily, which should be continued, at least three days. If dropsy does not disappear treatment may be resumed.

Nothnagel, also, tried calomel in numerous cases of dropsy, and found it to be very effective.

Opinions differ as to the mode of action

of calomel. Jendrassik supposed that it increased the resorption of the dropsical fluid, by the blood, and that calomel, does not act like digitalis by increasing the blood pressure.

Stintzing and some others hold that calomel acts directly upon the kidneys, because they found some increase of urine in patients not affected with dropsy. Cohnstein also holds this view.

ÆTIOLOGY OF DIPHTHERIA.

Wilson in the *Indiana Medical Journal* having given special attention to the above subject, arrives at the following conclusions. Diphtheria is caused by a specific germ. It is an acute infectious disease, the bacillus being transmitted from the body in particles of diphtheritic exudation, saliva, and ether secretions of the body. Also, that the poison may be transmitted by direct contact, by inoculation and by inspired air.

The most frequent mode of infection is by contact, with infected substances. The conditions which most favor the development of diphtheria are damp, cold localities, sudden changes of temperature, bad hygiene, depressing influences, and age.

The germs may be found in the mold on the wall paper and in foul, damp places for months after the disease has been present.

He also mentions that animals and fowls may convey the disease.

REPORT OF ONE THOUSAND CASES OF LABOR, WITHOUT A DEATH.

The *Columbus Med. Jour.* publishes the results obtained at the Preston Retreat, Philadelphia, by Dr. Joseph Price. In this series of cases, there were a number of complicated cases which were successfully dealt with, both as regards mother and child. The patients were admitted two weeks before labor and remained four weeks after. On admission they are given a bath, laxative and clean clothing. Until labor begins, two soap-baths are given weekly, bowels kept loose and kidneys are watched. When symptoms of labor begin, a thorough bath is given, an enema is administered, and the vagina douched with a 1–2000 bichloride solution, clean clothing is then applied, and patient put in room for delivery, both nurse and physician make careful toilets and, as a rule, only one examination is made. Only in complicated cases, are repeated examinations made. Only two douches are given, one before labor and one after. In the final douche some of the fluid is thrown over the thighs and external genitals, then a pad is applied, which is changed from four to six times daily. The mothers as a rule nurse their children. They remain in bed usually about eleven days. The infantile mortality is low.

A CASE OF HEALED TUBERCULOSIS WITH AUTOPSY.

Dr. Albert Abrams, in *Occidental Medical Times*, reports the following case —E. I. aet. 27 showed on examination, evidencs of cavity formation and consolidation of both pulmonary apices. There was also dilatation of both ventricles of the heart; irregular and rapid heart action. The sputa contained a very large number of tubercle bacilli.

The diagnosis, pulmonary tuberculosis. The patient was given creosote internally, in drop doses, and increased until a drachm was taken daily.

The pneumatic cabinet was also used daily. There was a gain of twenty-eight pounds in weight in four months. The sputa disappeared and bacilli were no longer recognizable. He then passed from observation and died six months later. The thoracic viscera were examined. The pleura over the apices showed cicatrices, which corresponded with the cavities, the size of walnuts in both apices. The left lung was much retracted, adherent and showed the appearance of interstitial phthisis.

The anatomical diagnosis was "Healed tuberculosis."

He cites this case, to show the value of creosote, in cases where the sputa is full of bacilli.

INJECTION FOR THE TREATMENT OF TUBERCULOSIS OF THE BLADDER.

Dr. Petit (*La Semaine Médicale*, No. 11, 1892) praises the following as an injection in the treatment of tuberculosis of the bladder:

℞

Iodoform	gms. 20.
Glycerine	gms. 10.
Distilled water	gms. 6.
Gum tragacanth	cgms. 20.

Selected Formulæ.

LOCAL ANÆSTHESIA OF THE BLADDER.

To produce local anæsthesia of the bladder inject the following:

℞ Aq. fontan. dist.....f℥jiss.
Cocain. murat.....gr. v-ix.
Sig.—Sufficient for one injection.

—*Il Raccoglitore Medico.*

PRESCRIPTIONS FOR ECZEMA.

Cases of acute eczema should not be treated by liquids, but by powders, according to *L'Union Médicale* of March 29, 1892. The following powder may be used where there is acute inflammation:

℞ Oxide of zinc.....
Subnitrate of bismuth.....āā..℥iiss.
Talc.....℥iss.

In the treatment of chronic eczema it is often wise to commence with ointments of zinc, such as follows:

℞ Oxide of zinc.....gr. xxx.
Vaseline.....℥vi.

Or the following may be employed if the first is not sufficiently active:

℞ Calomel.....from gr. vii to ℥i.
Oxide of zinc .....gr. xv to ℥i.
Vaseline..... ℥vi. M.

In cases which are unusually rebellious, as in the case of those eczemas which are in folds of the body, the following may be employed:

℞ Yellow precipitate.....gr. xv.
Pure oil of cade..... .....gr. xv to ℥i.
Vaseline.....℥vi. M.

This ointment is very active, and is harmful if employed in regions where it can produce folliculitis around hair-follicles, in which case the following may be employed:

℞ Sulphur.....gr. xv.
Coca-butter.....℥i.
Castor oil.....℥i. M.
Sig—A small quantity of naphthol or camphor may be added to this.

In those eczemas with abundant desquamation, the following prescription is useful:

℞ Salicylic acid.....gr. xv.
Oxide of zinc.....gr. xxx.
Vaseline.....gr. xxx.

When pruriginous eczema is present, the following is useful, as it protects the parts:

℞ Oxide of zinc..... ... .
Vaseline, equal parts.....

It may be well to incorporate with these substances, if pruritus is present, a little oil of peppermint or carbolic acid, in the proportion of 1 to 4.—*Ther. Gaz.*

IRITIS.

In certain cases of very painful iritis one may use the following:

℞ Aq. destillat.....gms. 10.
Cocain. hydrochlorat.....cgms. 20.
Homatropin. hydrobromat.....cgms. 30.

Homatropine used alone acts as an irritant and causes a profuse secretion of tears and peri-corneal hyperæmia; the use of cocaine diminishes these phenomena.

A POWDER FOR CORYZA.

℞ Naphthaline in an impalpable powder, ℥vi.
Powdered boric acid.....℥vi.
Powdered camphor.....gr. xv.
Extract of violets.....gr. xv.
Essence of roses.....gtt. xx.
Sig.—Mix and use as a snuff in coryza.

—*L'Union Mèdicale.*

LOCAL ANÆSTHESIA MIXTURE.

The following (*Lo Sperimentale*, No. 18, 1891) is given:

℞ Ether.....gms. 75.
Acid carbolic.....cgms. 30.
For external use. Spray on the part to be anæsthetized.

BRONCHO-PNEUMONIA.

L'Union Médicale for March 24, 1892, gives the following prescription for the treatment of broncho-pneumonia of children in the later stages:

℞ Brandy.....℥ss to ℥i.
Quinine sulphate.....gr. x.
Syrup of orange.....℥ss.
Peppermint-water..... ℥ii. M.
Sig.—Give 6 to 10 coffeespoonfuls of this mixture to a child each day.

INFANTILE DYSPEPSIA.

℞ Cascarilla Tincture.....2 grammes.
Rhubarb Tincture.....4 "
Bitter-orange-peel Tincture, Gentian Tincture, Nux-vomica Tincture } of each, 8 "
For a child of seven, 10–15 drops in water, after meals.

—*Simon.*

HOW TO ADMINISTER THE ETHEREAL EXTRACT OF MALE FERN.

Dr. Crequy (*Lo Sperimentale*, No. 4, 1892) prescribes the ethereal extract of male fern as follows:

℞ Ethereal extract male fern.....gms. 5.
Calomel.....dgms. 8.
Sufficient for fourteen capsules. Two capsules every ten minutes.

This prescription is based upon the fact that the active and toxic principle of the male fern is soluble in fatty oils. Hence castor oil, the common purgative after male fern, should be avoided in the expulsion of tænia by this drug.

THE
Medical and Surgical Reporter

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THE MEDICAL AND SURGICAL REPORTER.

SATURDAY, OCTOBER 15TH, 1892.

TAPE-WORMS.

A review of a certain French article on the tape-worms of man, which is now going the rounds of the medical journals, deserves a word of correction. The review states that a French scientist, M. Colin, has recently discovered that the tape-worm which man obtains from beef is identical with the tape-worm obtained from pork and that it is impossible to determine whether a person has become infected from pork or from beef, even by a careful study of the parasite passed by the patient.

These statements, however, are totally false and it seems almost impossible that medical journals should give any credence to such claims, when zoologists have worked the matter out so carefully and have given us so many characteristics by which we can distinguish between the two forms.

The two species in question are known to medical zoologists under the name of *Tænia saginata* ("the beef-measle tape-worm") and *Tænia solium* ("the pork-measle tape-worm.")

The beef-measle tape-worm is contracted by eating the larva (so-called *Cysticercus bovis*) which is found in the muscles of beef, especially in the muscles of the jaws and tongue. The head of this parasite is provided with four suckers *but bears no hooks.* If a mature segment of the worm is compressed between two glass slides and held up to the light, the uterus will be distinguished in the form of a straight stem running longitudinally and giving off numerous (15-30) branches on each side.

The pork-measle tape-worm on the other hand possesses two circular rows of small hooks on the crown of the head, as well as four suckers, similar to those found in the beef-measle worm. Upon compressing a segment between two glass slides it will be seen that the uterus possesses but 8–12 branches on each side.

With the aid of a microscope it is also possible to notice distinct differences in the size and shape of the eggs produced by the two worms.

The statement that M. Colin claims that both hogs and cattle are infested by the same species of larva is easily explained.

Under normal circumstances, the larvæ found in the muscles of hogs, possess the double row of hooks on the head. Occasionally, however, the hooks fall off and a larva is obtained which resembles very closely the larvæ found in beef, which as stated above, are never armed with hooks. M. Colin evidently had one or more of these degenerated larvæ before him when he made his statement that the two forms were identical,

It may possibly occur to some physicians that it is immaterial whether a man has the beef-worm or the pork-worm; but such is not the case, since the pork-worm is much more dangerous than the beef-worm. If a patient harbors the armed form he is not only subjected to the inconveniences arising from the presence of a parasite in his digestive tract, but he is constantly in danger of re-infecting himself with the eggs of the worm. The eggs of the parasites are present in the fæces and may, by various means, be transferred to his food and thus to his mouth. Upon arriving in his stomach the egg-shell is destroyed and a six-hooked embryo is set free. This embryo then bores its way through the intestinal wall and wanders to some muscle, to the inside of the eye or even to the brain, and develops into the larval form (*Cysticercus cellulosæ*) the same as it would do in the muscles of hogs.

The embryo of the beef-measle worm, on the other hand, cannot develop into a Cysticercus in the human muscles, and a man may swallow any number of the eggs with perfect impunity.

From this it will be seen that the physician should know whether his patient harbors the beef-worm or the pork-worm. If the latter is present, it should be removed immediately in order to prevent infection with the larvæ; further, if this worm is passed, the physician should be very careful in handling it as he may infect himself with the ova. The other worm, however, can be handled without fear of infection.

The infection of human muscles by *Cysticercus cellulosæ* (pork-measles) is not at all uncommon in Europe, but fortunately it is very rare in this country, since the adult parasite itself is of rare occurrence in America.

The tapeworm which is most frequently found in America is *Tænia saginata.*

These two species are not the only tapeworms found in man. *Bothriocephalus latus* (the broad Russian tape-worm) is obtained from fish. This parasite is very frequent in Russia, but has been recorded only four or five times in this country. *Bothriocephalus cordatus* and *Bothriocephalus liguloides* are two other species which are supposed to come from eating larvæ in the muscles of fish. *Hymenolepis nana* is an extremely small tape-worm which is quite frequent in Italy, but has been recorded but twice in the United States. *Hymenolepis diminuta* (*Tænia flavo-punctata*) is a small tape-worm of rats, which is occasionaly found in men. *Dypilidium caninum* (*Tænia cucumerina*)is a common tape-worm of dogs, which is now and then found in children. The larval stage of this worm lives in the fleas of dogs, and children become infected with the parasite by swallowing, consciously or unconsciously, fleas containing the larvæ.

The presence of a tape-worm can be definitely diagnosed by finding the loose segments in the stools, but if any doubts exist as to the presence of the parasites, any expert microscopist can settle the question by a microscopical examination of the fæces.

EXOPHTHALMIC GOITRE.

In a case of exophthalmic goitre, Dieulafoy gave the following prescription, as there was a distinct tendency to hæmoptysis:

℞ Powdered ipecac.....gr. ½.
Powdered digitalis-leaves.....gr. ¼.
Extract of opium.....gr. 1-10. M.
Sig.—To be made into one pill. From four to six of these pills may be given in twenty-four hours.

The effect of this medication is a decided moderation in the symptoms and general improvement in the condition of the patient. Should diarrhœa follow the administration of ipecac in these constant doses it may be guarded by increased doses of opium.

CHAPPED HANDS.

WASH.

℞ Green soap.....1 part.
Compound Benzoin Tincture.....4 parts.
Glycerin.....8 "
Rose Water.....16 "

—*Wendel.*

Book Reviews.

R. Blanchard. Sur les Œstrides Americains dont la larve vie dans la peav de l'Homme (Ann. d. l. Soc. entomol. d. France, 1892. pp. 109–154).

Blanchard has brought together a large number of cases of œstrus-larvæ, found under the skin of man; he further figures and describes ten larvæ in his possession which were taken from man. His general conclusions are that four American species of Œstrides belonging to the genus *Dermatobia* attack man, but all of these are found in animals as well, so that we have no right to speak of the species *Dermatobia* (or *Œstrus*) *hominis*.

The four species in question have been described under the names:

1. Ver macaque=*Dermatobia noxialis.*
2. Torcel=*D. sp.* (*?*)
3. Berne=*D. cyaniventris.*
4. Ver moyocuil=*D. p.*(*?*)

BOOKS RECEIVED.

Contributions of Physicians to English and American Literature, by Robert C. Kenner, M. D., The Physician's Leisure Library, Geo. S. Davis, Publisher, Detroit, Mich. Price 25 cents.

Cardiac Outlines For Clinical Clerks and Practitioners and First Principles in the Physical Examination of the Heart, for the Beginner, by William Ewart, M. D. Cantab, F. R. C. P., Physician to St. George's Hospital; Clinical Lecturer and teacher of Practical Medicine in the Medical School; Physician to the Belgrave Hospital for Children; Additional Examiner in 1891, for the third M. B. of the University of Cambridge; Late assistant Physician and Pathologist to the Brompton Hospital for Consumption and Diseases of the Chest. With sixty-two illustrations. New York: G. P. Putnam's Sons.

Hydrotherapy at Saratoga, a treatise on natural mineral waters, by J. A. Irwin, M. A., Cambridge, Eng.; M. A., M. D., Dublin University; L. M. Coll. of Physicians, Ire.; Member of the Royal College of Surgeons, Eng.; Member of the British Medical Association; Fellow of the London Obstetrical Society and the New York Academy of Medicine, etc.; formerly house surgeon, Royal Free Hospital, London; Shropshire and Montgomeryshire Counties Lunatic Asylum, and Physician to the Manchester Southern Hospital for Women and Children. New York: Cassell Publishing Company.

A Manual of the Operations of Surgery for the use of Senior Students, House Surgeons and Junior Practitioners; illustrated; by Joseph Bell, M. D., F. R. C. S. Edin., Consulting Surgeon to the Royal Infirmary and Surgeon to the Royal Edinburgh Hospital for Sick Children. Seventh Edition, Revised and Enlarged. Edinburgh: Oliver and Boyd, Tweedale Court. London: Simpkin, Marshall, Hamilton, Kent & Co., Limited, 1892.

Essentials of Diagnosis arranged in the form of questions and answers, prepared especially for students of medicine, by Solomon Solis-Cohen, M. D., Professor of Clinical Medicine and Applied Therapeutics in the Philadelphia Polyclinic; one of the physicians to the Philadelphia Hospital, etc., and Augustus A. Eshner, M. D., Instructor in Clinical Medicine in Jefferson Medical College, and in the Philadelphia Polyclinic; Registrar in the Neurological department of the Philadelphia Hospital, etc. With fifty-five illustrations some of which are colored, and a frontispiece. Price $1.50 net. Philadelphia: W. B. Saunders, 913 Walnut St., 1892.

Temperament, Disease and Health, by French Enser Chadwick, Commander U. S. N. New York: G. P. Putnam's Sons.

Book on the Physician Himself, and things that concern his reputation and success, by D. W. Cathell, M. D. New Tenth Edition (Author's Last Revision). Thoroughly Revised, enlarged, and rewritten. In one handsome Royal Octavo volume. 348 pages. Bound in Extra Cloth. Price, post-paid, $2.00, net. Philadelphia: The F. A. Davis Co., Publishers, 1231 Filbert Street.

The Medical and Dental Register–Directory and Intelligencer of Pennyslvania, New Jersey and Delaware (1892 Edition): pp. 424; price, by mail, $1.25. George Keil, Publisher, 306 Chestnut Street, Philadelphia.

Periscope.

THERAPEUTICS.

THE TREATMENT OF MIGRAINE.

Dr. Savigny believes that the etiological conditions must be considered. Those predisposed to this disease are the neuropathics, gout, rheumatics, diabetics, and anæmics. Constipation is an important adjuvant condition. The use of narcotics (morphine hypodermatically) is objectionable, in that it causes vomiting, is only palliative and not curative, and increases the constipation. Chloral only fulfils a symptomatic indication. The analgesics, salicylic acid, antipyrine, exalgine, acetanilide, and indeed sulphate of quinine, yield cures, but often relapses quickly follow.

Haig, believing that in gouty subjects there is a connection between this and an increased excretion of uric acid, uses large doses of citric or nitro-muriatic acid. He believes that antipyrine acts in the same way. A nitrogenous diet, meat, cheese, and beer, should be forbidden. By its chemical acid the good effects of chloride of soda are explained (Batom, Nothnagel, Rabod;) this, however, has been useless if there exists a gastralgia. The treatment between the attacks may be the reduction of obesity (method of Oertel), hydrotherapy, total rest, physical and intellectual, before a cold bath, with physical exercise afterward, or if the bath is a hot one, followed by rest (procedure of Pelezeus). For the attack itself, Dunn has used co-

caine hypodermatically, although it often causes insomnia, agitation, exaggerated reflexes, rapid pulse, palpitation. Rossbach believes in the value of local massage. Neftel uses hot water to increase transpiration, muscular exercise, improvement of the general condition. Morris Lewis uses ten drops of the tincture of eucalyptus four to six times daily, while Gill Wylie has prescribed with success a grain of ox-gall and a drop of essence of gaultheria six times daily. The author employs caffein and bromide of ammonium in peppermint water, every two hours during the attack, recommending, in addition, electricity, either static or galvanic, with general faradization.—*Revue de Thérapeutique Médico-Chirurgicale*, 1892, No. 4, p. 94.

STRONTIUM SALTS IN BRIGHT'S DISEASE

At a recent meeting of the Therapeutical Society, M. Constantin Paul reported on the use of strontium lactate in the treatment of albuminuria. The lactate is the salt preferred, and it is made by dissolving strontium hydrate in lactic acid, sufficient water being added to assist solution, which should be brought to a state of neutrality by adding the strontium hydrate to saturation. The pure lactate (which gives no precipitate with potassium chromate) has been given in daily doses up to 8 or 10 grammes to adult males without danger. Although not diuretic, it diminishes the quantity of albumin and generally ameliorates the symptoms. This has been specially noted in rheumatic parenchymatous nephritis, in the albuminuria of gouty or scrofulous subjects, scarlatina patients, and that which is common before and after confinement. He added that the best time to begin the administration of strontium lactate is when the secretion of urine is scanty and there is a tendency to uræmia. In the course of the discussion Dr. Dujardin-Beaumetz stated that the bromide of strontium was more easily supported by the stomach than other alkaline bromides. M. Patein stated that yellow chromate precipitates 1 milligramme of chloride of barium in 20 grammes of water, but it also precipitates salts of strontium when they are not in a very weak solution, hence errors might arise. Bichromate of potash, on the contrary, will detect a solution of $\frac{1}{2000}$ gramme of a salt of barium, but does not affect strontium salts. The method of procedure which he suggested was to make a saturated solution of the salt and add two or three drops of bichromate solution; the liquid should remain clear even after twenty-four hours. Or, make a weak solution of the strontium salt and add two or three drops of solution of neutral chromate; the liquid should remain clear for some minutes. M. Patein added that he found the salts of strontium sold to be generally impure. Dr. Dujardin-Beaumetz expressed his pleasure at this statement; the tests he considered to be very important.

A CHEAP DISINFECTANT.

Nitrate of lead is the cheapest disinfectant known that fulfils its intent. It does not, however, prevent putrefaction. The chloride of lead is much more effective in all directions. It is made by dissolving a small teaspoonful of the nitrate of lead in a pint of boiling water; then dissolving two teaspoons of common salt in eight quarts of water.

When both are thoroughly dissolved mix the solutions. When the sediments has settled you have two gallons of clear fluid, which is a saturated solution of chloride of lead in water. A pound of nitrate of lead will make several barrels of the liquid and cost from eighteen to twenty-five cents retail.—*Annals of Hygiene*,

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PYRAZOLE.

H. Tappeiner (*Centralblatt fur. klinische Medicin*, No. 46.) has found that this substance possesses peculiar properties which may be used to advantage in certain forms of nervous disease. Given in large doses it is a paralyzer of the nervous centre. As a heart stimulant its action is prompt. That it is an excitant of the secretory apparatus of the kidney is shown by the active diuresis following its administration. Aside from these conditions produced by pyrazole, the physiological action is very similar to that of antipyrine. The dose is from one-half grams. No nausea, vomiting or other unpleasant sensations have been observed to follow its employment.

ATROPINE AS A HEMOSTATIC.

Dmitrieff (*Wratsch*, 1891, No. 50) reports the successful employment of atropine as a hemostatic in two cases of metrorrhagia. In one case the hemorrhage per-

sisted, despite the employment of the usual remedies, including the tampon; but ceased after injections each of gr. $\frac{1}{24}$ of atropine. The second case occurred in an anæmic woman, who became syncopal, with cold extremities. The first injection was followed by improvement, and the third by cessation of the bleeding. In both cases the pupils were slightly dilated.—*Wiener medizin Presse*, 1892, No. 16, p. 639.

METHYL-VIOLET IN MALIGNANT TUMORS.

Nanu has obtained very good results in ten out of twenty-five cases of malignant tumors by injecting methyl-violet according to the system of Von Moorhof. The diagnoses were confirmed by microscopic examination. On the other hand, Torrie after a trial of this method in several cases came to the conclusion that it is never of any benefit and may be harmful.

SULPHUR IN CHLOROSIS.

Professor Schultz again draws attention to the value of sulphur in certain cases of anæmia. After alluding to the prominent part played by sulphur in the life of the cell—a part analogous to that of hæmoglobin in the blood—and to the excellent results obtained by the use of sulphur waters in malarial cachexia, he comes to these conclusions:—(1) In cases of pure chlorosis in which the iron proves inefficient, the general condition is decidedly improved by sulphur; (2) after the administration of sulphur has gone on for some time, treatment with iron can be commenced and continued with success; (3) in cases of chlorosis complicated with catarrhal and inflammatory conditions of the digestive tract, sulphur is not borne. Schultz relates a case illustrating the advantage of the sulphur treatment. The patient, a woman 34 years of age, showed an extreme degree of anæmia, and had loud cardiac bruits. She complained of headache, giddiness, shortness of breath, palpitation, and complete loss of appetite, with pain in the epigastrium after food. Rest in bed with bland fluid diet was ordered, and this—with bismuth and morphine and occasional doses of Carlsbad salt—relieved the gastric pain. Iron was tried in the form of the saccharated carbonate, but vomiting immediately set in, and it had to be discontinued. Other preparations of iron were tried with no better result. Sulphur was accordingly given, and this she bore very well. Great improvement ensued; the anæmic appearance lessened, and the headaches and palpitation disappeared. She was discharged from hospital greatly bettered; but she still complained of some palpitation on exertion. Iron was again given as the saccharated carbonate, and this time was tolerated without difficulty. The sulphur was used in the form of flowers of sulphur mixed with sugar of milk, as much being taken three times a day as would lie on the point of a knife.—*Berliner klin. Wochenschr.*, No. 13, 1892.

LUECKE'S METHOD OF TREATING ERYSIPELAS.

Winkler (*Wiener med. Wochenschrift*, No. 46–48, 1891) writes that the method of Luecke consists of the application of rectified oil of turpentine with a brush or small compress with stroking movements from the healthy toward the diseased portion several times daily; the séances should not exceed five in the twenty-four. In the after-treatment following each séance, the parts are covered by cotton wadding held in place by a bandage. The parts are thoroughly cleansed in the beginning with ether or alcohol. Excoriations are covered with sublimated lanolin. Twenty-two cases are reported, showing an average of five days elapsing between the first application and the desquamation marking the subsidence of the disease. The benefit derived is said by the author to depend upon the ozone present in the oil of turpentine.

TREATMENT OF ENTERIC FEVER.

Mason (*Boston Med. and Surg. Jour.*, Nos. 14 and 15, 1892), has published a report on 676 consecutive cases treated in the Boston City Hospital. Favorable results were obtained from the use of hydronaphthol, though relapses were not prevented. In a series of 103 consecutive cases, forty-five were treated with hydronaphthol and fifty-eight without. In twenty-seven of the forty-five cases diarrhœa diminished or ceased, but in some this effect was not produced for two weeks. Four cases relapsed, and two died. Of the fifty-eight treated without hydro-

naphthol, six relapsed and seven died. Hæmorrhage from the bowel did not occur in any cases treated with hydronaphthol, but did occur in three of the others. In the hope of preventing relapse, thirty cases were treated with the drug at first every two hours, later every four or six hours, from the time of the admission until convalescence was well established. Two cases, however, did relapse, and one died with symptoms of perforation. From a comparison of his statistics (676 cases) with Hare's (1173), Mason arrives at the conclusion that the general mortality might be reduced two per cent. by the systematic use of cold baths, and that this diminution would be effected mainly by a decrease in the number of deaths among women. Women offer a feebler resistance to pyrexial exhaustion, and it is in preventing this exhaustion that the bath method has its chief effect.—*Brit. Med. Jour.*

HÆMOSTATIC VALUE OF SHEPHERD'S PURSE.

This has been known for a long time, but was temporarily lost sight of. The drug has, however, been resurrected, and much testimony as to its efficiency in uterine bleeding is being adduced. Shepherd's purse loses much of its efficacy in drying, so that only the fresh herb or a fluid extract prepared from the latter should be employed. As a styptic Von Oefele considers this fully equal to hydrastis, with the advantage of cheapness and absence of bitter taste. A single dose of the green fluid extract should not exceed fifteen grams, the maxim total dose for twenty-four hours being thirty grams.

MEDICINE.

PARALYSIS OF THE BRACHIAL MUSCULO-CUTANEOUS NERVE.

Windscheid describes (*Neurol Centralbl.,* the case of a man who noticed a sensation of numbness in his right thumb and part of the front of the forearm, with partial inability to bend the elbow, a few hours after carrying a heavy marble slab on his right shoulder, a sharp edge of the slab having pressed deeply into the supraclavicular fossa. At examination a fortnight later the forearm could be voluntarily flexed, but, when bent, the biceps remained flaccid and uncontracted; numbness and formication were felt in the volar portion of the thumb and the radial side of the fore-arm; in the same regions analgesia was almost complete, though contact impressions were fairly well perceived; there was no ordinary reaction of degeneration. Indirect faradic stimulation of the affected biceps elicited "Rumpf's traumatic reaction" very clearly. On cessation of the tetanizing current a wave of short contractions appeared in the muscle. This phenomenon was discovered by Rumpf in cases of traumatic neurosis, and was considered by him to be an important objective indication of that affection. He observed it in various nerve territories besides that of the nerve primarily excited. In Windscheid's case it was limited to the biceps, and was not obtained on direct stimulation of the muscle. The sign, in Windcheid's opinion, has not the value accorded it by Rumpf; it partially resembles Ritter's opening tetanus. In the case above referred to it could only be regarded as an indication of increased excitability of the nerve below the injury. After three months treatment with electricity the biceps contracted well, the sensory disorders were diminished, and Rumpf's reaction was less distinct.—*Brit. Med Jour.*

CEREBRAL SYPHILIS.

Cnopf (*Münch. Med. Woch.,* March 15th, 1892) relates the case of an infant, thirteen weeks old, which, in addition to the ordinary symptoms of intestinal catarrh and atrophy, had severe attacks of pain, during which the neck and back muscles became rigid. Eight days before death there were convulsions. At the necropsy there was a circumscribed greyish-red gelatinous mass in each corpus striatum. On the left side the centre was yellow and breaking down. The occipital lobes were sclerosed. There was external and internal hydrocephalus (*hydrops e vacuo.*) There was no change in the vessels. The other organs were healthy. The author shows by statistics that cerebral syphilis in children is rare. He had only been able to find twelve recorded cases. In one-half there was disease in the arteries and in one-half gummata. These gummata occurred mostly in the base of the frontal lobe, partly as yellow-

ish centres of softening and partly as calcified masses. In one case the brain was atrophied and sclerosed. Only four of the twelve cases occurred under one year of age. Although the parents of the infant appeared quite healthy, it was ascertained that the father had syphilis eight years previously, for which, however, he was thoroughly treated. Most of the twelve cases had external manifestations of syphilis as well as cerebral symptoms. Among the latter were noted nystagmus, dilatation of one pupil, diplopia, optic atrophy, swelling of the optic disc, chloroiditis, loss of smell and hearing, hemiplegia, anæsthesia, paralysis of single nerves, mental symptoms and fits. In the author's case there was no external evidence of syphilis, and no symptoms which could be put down exclusively to cerebral disease. The author then refers to the difficulty of diagnosing cerebral syphilis from other forms of cerebral disease, and yet the diagnosis is essential owing to the importance of early treatment.—*Brit. Med. Jour.*

SOME ANOMALIES OF THE CRANIA OF THE INSANE.

Bianchi and Marimo have examined over a thousand skulls of insane persons. Among their conclusions are the following: They believe that cranial anomalies are, perhaps, more dependent on the locality from which the persons came than on the diseases or the degree of intelligence of the individuals. In so-called degenerative forms, purely bony anomalies related to cerebral development are more rare than in psycho-neurotics. There is no direct relation between insanity and cranial anomalies, but these are much more common in the skulls of the insane.

MEDICAL EMERGENCIES.

The *American Practitioner and News* publishes the following list of medical emergencies, which are all worthy of noting.

Accidents in giving anæsthetics.—Tincture of digitalis hypodermically; draw out the tongue and see that respiration is not mechanically impeded; invert the patient quickly and temporarily; use forced respiration promptly, apply external warmth and stimulation; avoid the exhibition of alcohol.

Angina Pectoris.—Inhalation of chloroform, or a few drops of nitrite of amyl; 1-100 grain of nitro-glycerine, internally; placing the feet in hot water; mustard to the precordial region; dry cup between the shoulders; hypodermic injections of morphine and atropine; administrations of stimulants and anodynes.

Apoplexy.—Elevate the head and shoulders; if pulse is moderately strong and the brain congested, bleed from the arm freely, sixteen ounces or more; eleterine (one-sixth grain) or croton oil, two drops in a drachm of sweet oil or glycerine; cold to the head by means of an ice bag.

Asphyxia.—In drowning, hold the patient's head downward for a few seconds. In hanging or choking, bleed from the jugular. If there is obstruction to passage of air through the mouth or nose, open trachae. Artifical respiration at once and to be continued. Friction, warmth, warm bath (100°), ammonia to nostrils, galvanizing of phrenic nerve.

Asthma, Spasmodic.—Hypodermic of atropine into the nape of the neck; inhalation of smoke of stramonium leaves; fluid extract of nux vomica, internally alcohol, ether, chloral, opium; inhalation of chloroform cautiously administered.

Colic, Gall.—Morphine, hypodermically; inhalations of chloroform; hot applications to the abdomen.

Coma.—Dark room; head high and cool; head shaved; low diet; croton oil; if due to compression antiseptic trephining; if due to anæmia, philocarpine and hot baths.

Heat Stroke.—Remove clothing, sprinkle with water, cold cloths to the head, hot cloths to feet; antipyrin; bleeding in robust subjects. After temperature is reduced give alcohol and diffusible stimulants, hypodermically if necessary.

Pulmonary Hæmorrhage.—If severe, raise the thorax, administer opiate; gallic acid, fifteen grains, every fifteen minutes; ergotin, five to ten grains hypodermically, two or three times daily; ice bags to the chest; as a last resort a ligature may be thrown around the larger limbs. (Tyson).

Hæmorrhage From Stomach or Bowels.—Tannic acid, ten to fifteen grains, if due to capillary oozing. If from typhoid fever or ulcer of the stomach, treat as for pulmonary hæmorrhage.

Hiccough.—Acid drinks, cold douches, ether or chloroform internally, externally

or by inhalation; musk, opium, antispasmodics.

Hysteria.—Inhalations of ether or chloroform, for the spasms. If this is contra.indicated, give mono-bromide or camphor, musk, valerian, assafetida, the bromides. In convulsive seizures, morphine and atrophine hypodermically.

Shock.—Warmth; hot water bottle to feet, flanks and epigastrium; warm effusion to head; horizontal position; frictions, stimulants, brandy, ammonia, galvanism to precordia.

Strangury.—Vesical, hypodermic injection of morphine, to be followed by other remedies; rectal enemata of starch water and laudanum, followed by a hot sitz-bath.

MONSTROUS HYPERTROPHY OF THE PROSTATE.

Dr. Adler presented at the Freie Verein der Chir., in Berlin, the following history: A patient of sixty-six years had for fifteen years suffered from difficulty in urination, but had used the catheter without trouble until recently, when severe bleeding was occasioned by its introduction. Suprapubic and, subsequently, perineal cystotomy were done, but no permanent relief was afforded. The blood oozed from the prostate as from a sponge. The Paquelin cautery was employed, but death soon took place. The prostate measured 6½ centimetres wide and 20 centimetres long.

INSOMNIA OF ALCOHOLISM.

Krafft Ebing speaks very highly of methylol as a hypnotic in this condition. It is employed hypodermically in doses of fifteen minims of a ten per cent. aqueous solution, from one to three times in twenty-four hours.—*Med. Record.*

SURGERY.

A NEW ANTISEPTIC.

Professor Emmerich of Munich has introduced a new antiseptic substance named oxychin aseptol, which he claims will prove fatal to the pus coccus (*staphylococcus pyogenes aurus*) in 0·3 per cent. solution. The drug should be of value in the treatment of gangrene and other putrefactive diseases, and being cheaper than carbolic acid, may be worthy of trial as a substitute for the latter agent.

THE SCHWALBE TREATMENT OF HERNIA.

Steffen (*Correspondenzblatt für Schw. Aerzte,* xxii., No. 2) discusses the report of Heidenthaler in regard to the results obtained in Billroth's clinic in the treatment of herinæ by the method of Schwalbe. He says the poor results are due: 1. To the shortness of the treatment. 2. To the fact that the injections were made without sufficient intervals intervening, and therefore produced an acute inflammation and inflammatory products that were easily absorbed. 3. They were too few in number and too near together. The treatment is one more applicable to private practice and dispensary work, where patients can be under treatment for a long time with long intervals between the injections, producing a chronic inflammation with the production of connective tissue, than it is to hospital practice where the patient occupies so much time and where the methods of Macewen and Bassini produce quicker results. He describes his own method of procedure, with which he obtained favorable results with the treatment of Schawlbe. —*Amer. Jour. Med. Sci.*

A NEW METHOD OF PRODUCING LOCAL ANÆSTHESIA.

Dr. Wiesendenger describes in the *Jour. fur Zahnheilkunde* a new method of producing anæsthesia by the application of cold, the characteristic feature of which is not the cold-producing agent which touches the desired part, but a metallic tube or chamber which is cooled by carbonic acid. The cold may, according to the requirements of the case, be regulated from the temperature of cold water to one sufficiently low to cauterize. The first symptom of this artificial cold is anæmia of the cellular tissue, producing a slight sensation of burning, which is followed by anæsthesia, which lasts from one to two minutes and then disappears without any ill effects.

As the instrument may be manufactured of almost any shape, it is evident that this new method may be used for a variety of purposes. The simple turning of a tap will regulate the stream of carbonic acid to any degree of temperature down to 4° F. No moisture is produced. In using this cold for the purpose of cauterizing, the surgeon has the advantage of producing anæsthesia at the same time. When

applying it to any of the internal cavities, such as the mouth, it is necessary to have the parts carefully dried, as the tissues would otherwise adhere to the instrument. Dr. Kummel applied the method in the case of a boy in the Maria Hospital at Hamburg with such complete success that the boy looked on without moving a muscle while a deep incision of twelve centimetres in length was made in his thigh.

Other gases which can be brought into a fluid state may be used in place of carbonic acid. The carbonic acid which has been used for purposes of anæsthesia may be led into a vessel which has been tested to a pressure of three atmospheres, and is provided with a manometer and safety-valve, whence it could be used as an agent for preserving food. An iron bottle of fluid carbonic acid at a pressure of fifty atmosphere is sufficient for fifty operations. This can be bought for four or fives hillings. The instrument for the application of cold to the tissues costs thirty shillings.—*The Lancet.*

OPERATIVE TREATMENT OF PES TALUS PARALYTICUS.

Eugène Rochard (*Rev. de Orthop.*, employs two methods: The shortening of the tendo Achillis by excision of a portion of the same or by an oblique incision and attaching both portions to each other, followed by the transplantation of tendons by the blending of peronei with the insertion of the tendo Achillis. The shortening of this tendon by Walsham's and Willet's method was almost completely successful in seven cases; in no case was there a complete failure. However, the period of observation was not long enough in these cases. Gibney by oblique separation reached quite excellent results in seventeen cases—in eight cases, satisfactory results,—and in but three cases was he unsuccessful. Kirmisson also obtained a good result in a similar case. The author modifies the latter process by adding a lateral freshening to the simple lapping over each other of the separated parts of the tendon, thus increased chances of union with shortening being offered. Which of these methods is to be preferred is to be determined by a careful examination of the individual muscles. If the gastrocnemius, plantaris and soleus are only atrophic and not completely paralyzed, the anomaly being exclusively caused by an exceedingly strong tension of the tendo Achillis, simply shortening is to be recommended. But if the muscles are completely paralyzed,—which, however, occurs but rarely, it almost without exception following infantile paralysis—the transplantation of tendons is to be employed in order to connect the peronei. Arthrodesis is to be employed only clear cases of dangle foot. The good results of the operation are, of course, lessened by secondary changes in the plantar arch by retraction of the plantar fascia, etc. *A priori*, however, the idea (Fayette Judson) that a weakened muscle must not be allowed to act as it may be injured thereby is to be abandoned.

GENERAL RESULT OF REMOVAL OF TUBES AND OVARIES.

Dr. Wharton Sinkler has given some interesting facts as to the effect of the removal of these organs. In first place, he claims it unjustifiable to remove these organs for the relief of neurasthenia and hysteria where marked disease is not found. It is an undoubted fact that cases of neurasthenia have been cured where even structural changes in the ovaries have taken place. And again, it is the fact that patients are, in some cases, more nervous after than before operation. It is claimed that cures have resulted in epilepsy and insanity, particularly in those cases associated with pain and aggravation of symptoms at the menstrual period, and, as well, these diseases have followed operations. Gain in flesh is marked only where the operation has been performed for pus tubes, etc. Growth of hair on the face, change of voice and acquirement of masculine traits are very rare. Sexual appetite and faculty for the enjoyment of same unchanged, though it must be said that in time(year) it seems to diminish, which may be by the natural result of age.—*Annals of Gyn. and Ped.*

COMPOUND ELIXIR OF IODINE.

This is the name suggested by Wm. Pepper, M. D., (*University Med. Magaz.*, Feb., 1892, p. 376) for a preparation made by dissolving phosphorus, 1-100 grain, and iodide and bromine, each, $\frac{1}{6}$ grain, in one drachm of simple elixir. It has been used with considerable satisfaction in cases of torpid circulation with subacute gastric catarrh, and of subacute

bronchitis with a relaxed and atonic state of the system. An elixir of balsam or of white pine may be used as the solvent, to which the name of *Compound elixir of pine* might be appropriate.—*Amer. Jour. Pharm.*

INTUBATION OF THE LARYNX.

Schmiegelow reports four cases of intubation for croup with three deaths (in a child aged eight, from acute paralysis of the heart; in a child aged nine months, from descending of the diphtheritic process; in one aged eleven months, from pneumonia), and one recovery, in a child aged three.

Schmiegelow performed intubation in eight cases of chronic stenosis, six of which were cases where there was difficulty in getting rid of the canula after tracheotomy, while one case was that of a man, aged twenty-four, who had contracted, as a child, a cicatricial stenosis of the trachea from tracheotomy, and who had at times difficulty in breathing; one was a case of aphonia spastica. The author advocates intubation (1) in cases of acute stenosis due to edema of the larynx; or (2) to diphtheria, when the asphyxia is so developed that there is no time for tracheotomy; or (3) when permission to do the latter operation cannot be obtained; (4) in cases of paralysis of the abductors or spasms of the abductors; (5) in cases of foreign body in the larynx; when there is no time for tracheotomy; (6) in cases of acute stenosis from thyroiditis; (7) all cases of chronic stenosis.—*The Satellite.*

THE TREATMENT OF HÆMORRHOIDS.

At a meeting of the Medical Society of London, Lauder Brunton dwelt upon the influence of cold and over-eating in the development of hæmorrhoids. Mercurials, followed by mild salines, are useful in preventing hepatic congestion. Aloes, in large doses, may conduce to the development of hæmorrhoids by over-stimulation of the muscular coats of the rectum. Small doses, on the contrary, exert a beneficial influence. Hepatic congestion due to cold may be relieved by the application of hot water bags to the nape of the neck and over the liver. Patients subject to hæmorrhoids should accustom themselves to emptying the bowels at night, so as to secure rest in the recumbent posture. When there is much irritability at the anus it is preferable to use a soft sponge and water instead of paper more or less harsh. A pledget of animal wool dipped in hamamelis and introduced into the rectum will act as a mechanical support and as an astringent. In obstinate cases an anal pad may afford great relief.—*Med. Progress.*

THE PATHOGNOMONIC SIGNS OF PERFORATING APPENDICITIS.

Dr. Simon Baruch (*Med. Record*) emphasizes the point that symptoms of shock, carefully looked for, may always be found in perforating appendicitis. These are as follows: the countenance is anxious, the finger-tips, nose and ears are cool; pulse and respiration are out of proportion to temperature, the right inguinal region is very tender, the patient usually lies with the right leg drawn up. Guided by them, Dr. Baruch opposed the views of an experienced physician in one case, insisting upon the operation; and in another did not approve of the operation advised by an experienced surgeon. In both cases his reliance on these pathognomonic signs proved useful to the patient. On the ground of his own experience, as well as that of others, the author urges that when performing appendicitis is diagnosed, either positively or probably, an immediate operation to remove the exciting cause is as imperative as ligation of the vessel in hæmorrhage.

The fact that laparotomies are now constantly performed, under strict asepsis, with absolute safety, should induce the attendant to clear up a doubtful diagnosis of perforating appendicitis by an operation before septic peritonitis forbids it.

OBSTETRICS.

CHLORATE OF POTASH IN HABITUAL ABO RTION.

E.S. McKee in *American Practitioner and News* says:

I have had some noteworthy results in repeated abortions from the use of chlorate of potash. In one case where the patient had aborted ten times while married to two different husbands, fifteen grains of chlorate of potassium were given three times a day; also tr. ferri chloridi, and two children were brought to term and

born alive. No cause could be found in this case, but from the history and the time of the occurrence fatty degeneration of the placenta was suspected. The use of this remedy was first suggested by Sir James Y. Simpson, who employed it on the theory that an abundance of oxygen was supplied to the fœtus by this means through the placental tufts. He gave it because of disease of the placenta, but also believed that it was a means of arterializing the blood. He was led to the use of this remedy by the experiments of Davy and Stephens, who found that an alkaline salt when brought into contact with the blood gave it an arterial appearance. From the large amount of oxygen contained in each atom of the chlorate of potash, Simpson argued that the maternal blood would be better oxygenated, and the child's respiration thereby improved by its administration. Anæmic patients improve in color under this drug.

Alkalies are promoters of waste and assist the removal of inflammatory products. Patients who had not gained under tonics and nutrients will improve in weight and strength upon the withdrawal of these remedies, waste producers, provided their use has not been too long continued. It is a well recognized fact that there is an excessive accumulation of carbonic acid in the presence of inflammatory changes of tissue. In the presence of carbonic acid nascent oxygen is formed from chlorate of potash, which may show how the inflammation is relieved and oxygen furnished the fœtus. It is claimed on good authority that the chlorate of potash does not part with any great amount of oxygen at the body temperature, yet there remains the fact that by increasing the alkalinity of the blood its oxydizing function is augmented. Whatever its *modus operandi,* whether as a tonic or by its decomposition in the blood, thus directly furnishing an increased quantity of oxygen to the fœtus through the placental tufts, or whether it puts the blood in such a state that it is able to carry an increased supply of oxygen, the clinical fact stands that it has a direct beneficial effect in properly selected cases, that is, where there is fatty degeneration of the placenta.

Shoemaker, in his new edition, recommends chlorate of potassium in plac ntal inadequacy where there is deficient oxygenation of the blood. He gives it in 15 grain doses three times a day, thus preventing disease of the placenta, and enabling a woman to go on to term who had previously miscarried a number of times.

OUGHT INFANTS TO BE WASHED IMMEDIATELY AFTER BIRTH?

In a paper read before the Section on Diseases of Children at the Detroit meeting of the American Medical Association, Dr. F. S. Parsons, of Boston, says:

All wild animals dress their young directly after birth. The human mother, however, cannot perform such duties in the manner of the lower animals, whose offspring, moreover, are covered with hair, necessitating simply the drying of a wet surface; but the child, with practically no hair on the body, is ushered from an aqueous solution at a temperature of about 100° F., to an aërial temperature of from 20° to 30° lower. Apparently, to guard against this sudden cold, Nature has placed a sebaceous covering, which, if allowed to remain, would protect the child from the chilling influences of the reduced temperature. Dr. Parsons, however, does not so much object to the washing of the child as to the manner in which it is generally done, and which so often leads to catarrhal troubles, varying from simple snuffles to broncho-pneumonia. He recommends a little skirt with sleeves and hood, made of some soft unirritating material—for example, Canton flannel—in which the infant should be placed, after being quickly rubbed with pure hog's lard. Here it should remain for four or five days, when it would become accustomed to the lowered temperature, and could with much more safety be washed; but as this would not satisfy the average mother, he would advise covering the head and body with lard, then quickly placing the child in a tub of water at about 103° F. there cleaning and washing the body with a soft linen cloth. He has never seen a child so treated suffer from catarrhal troubles in any way.—*Medical News.*

RETAINED PLACENTA AFTER ABORTION.

J. A. Winter (*American Gynecological Journal*) gives the history of a case in which an abortion occurred and metrorrhagia supervened for the following six

months when decided uterine hæmorrhage appeared. Upon the supposition that some portion of the product of the last conception remained in the uterine cavity, the writer (who had not treated the patient at the time of the abortion) ordered fluid extract of ergot, in dram doses, at intervals of two hours, until three doses were given. The following morning, upon visiting the patient for the first time, the writer was shown a specimen of placenta and organized blood-clot, which had been expelled from the uterus during the night. The bleeding immediately ceased with the removal of its cause. Had the ergot failed to dislodge the mass the placenta forceps or curette would have been speedily used. During the discussion of the paper by the members of the Detroit Gynæcological Society, the use of ergot for such cases was adversely criticised, for the reason that the drug is apt to cause contraction of the lower as well as of the upper portion of the uterus. In cases where the os is tightly closed, opium is advocated to relax the cervix, and the employment of ergot is to be restricted to those cases in which the os is patulous. Concerning the treatment of abortion in general, the sentiment of the society was unfavorable to the so-called expectant plan. As soon as it becomes evident that an abortion is inevitable, the only safe plan to pursue is that of emptying the uterus. In reference to methods, the finger is to be used when practicable, the placenta forceps or curette at other times. There was some difference of opinion as to the best method of dilating the constricted os uteri, either for the purpose of expelling the ovum or for the control of hæmorrhage. Braun's colpeurynter was relied upon by some members, while a tampon of iodoform gauze packed into the cervical canal (one half to a yard long by one inch wide) was preferred by others. The thorough disinfection of the vagina, before and after the removal of the uterine contents, is obviously necessary.—*Arch. Gyn., Obst. and Ped.*

GYNECOLOGY.

CANNABIS INDICA IN THE PAINFUL DISEASES OF WOMEN.

Dr. J. B. Mattison, of Brooklyn, praises cannabis highly as an anodyne and hypnotic. It is not a poison, there is no fatal case on record. It must be given in full doses. Small doses are stimulating and exciting, large ones sedative. It is equally useful in dysmenorrhœa, especially of the spasmodic variety, and in painful chronic metritis. In many cases of uterine cancer it allays or prevents pain. It acts well in megrim, in the neuralgias, and headaches so common in anæmic women. It is a safe and excellent hypnotic in insomnia. The tincture must be given in doses of twenty to sixty minims, and of the solid extract, one-half to two grains. Farlow recommends the following suppository in dysmenorrhœa, to be introduced every night, beginning five days before the time of the period:

℞ Ext. cannabis indica.....
Ext. belladon.....āā..gr. j.
Ol. theobrom.....5 j ss.

—*Chicago Medical Times.*

LATENT GONORRHŒA IN WOMEN.

In these days we hear and read much of the woeful effects of latent gonorrhœa in woman contracted from the husband who supposed he was cured of the result of his folly, some time— a year perhaps, before his marriage. We believe that medical men ought to be very guarded in giving permission to marry to young men who have, within a short period, contracted a gonorrhœa, or who suffer from a gleety discharge. Want of caution in this matter is probably the reason why an unfortunately large number of young women, married in the best of health, fall into chronic ill health shortly after marriage, or become, in two or three months, victims to a fatal metritis or perimetritis after abortion.

In cases of this chronic gonorrhœa, the leucorrhœa is of itself of little diagnostic importance, as it may vary with wide limits, both as regards quantity and transparency, but it is usually yellowish-colored, as if mixed with pus, and non-transparent as it flows from the cervix uteri. The cervix is usually surrounded with an intensely red erosion, of some lines in width. The uterus is usually tender, and the regions of its mucous membrane adjacent to the mouths of the Fallopian tubes are specially tender. Inflammation of the urethra at an early stage of the disease is of great value, but it soon passes away. Much more value must be attached

to the condition of the vulvo-valginal glands, and the glands of Bartholin. The vulvo-vaginal glands are enlarged, and the vulva is sensitive. The existence of inflammatory catarrh of the glands of Bartholin is an important sign. On separating the labia minors from the remains of the hymen between the first and the under lateral caruncula myrtiformis in a woman who in former years has suffered from gonorrhœa, it is the rule to see an intensely red point, covered over with glairy mucus, from which as a centre a red streak, constantly becoming fainter, stretches upward and outward, and gradually becoming pale, passes over into the color of the surrounding mucous membrane.—*Mass. Med. Jr.*

ELECTRICTY IN PELVIC TROUBLES.

On the use of electricity for pelvic troubles, Dr. Price says: "It is utterly incomprehensible how any sane man can advocate the use of electricity; it seems that it is only in such hidden regions as the pelvic that the electricians claim any resulting good from their treatment, Why not apply this all-powerful, this infallible and omnipotent curative effect of electricity to the resolution of abscesses found in the neck of strumous children? Certainly wealthy mothers would pay well, even handsome fees, to save their children from carrying through life loathsome scars, not to mention the satisfaction of the operator upon curing his patient without the deformity resulting from the formation of a cicatrix."—*National Med. Review.*"

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, OCTOBER 2, 1892, TO OCTOBER 8, 1892.

Major Robert H. White, Surgeon, U. S. Army, is relieved from duty at Fort Myer, Virginia, to take effect on the expiration of the leave of absence granted him, and will then proceed to report in person to the commanding officer, Jefferson Barracks, Mo., for duty.

Major Daniel G Caldwell, Surgeon, U. S. Army, is relieved from duty at Jefferson Barracks, Mo., and will report in person to the commanding officer, Madison Barracks, N.Y., for duty at that place

Captain William C. Gorgas, Assistant Surgeon U. S. Army, is relieved from duty at Fort Barrancas, Florida, and will report in person to the commanding officer, Fort Reno, Oklahoma Ty., for duty at that post, relieving Captain John L. Phillips, Assistant Surgeon.

Captain Phillips on being relieved by Captain Gorgas, will report in person to the commanding officer, Fort Myer, Virginia, for duty.

Captain Henry D. Turrill, Assistant Surgeon, U. S. Army, is relieved from duty at Madison Barracks, N. Y., to take effect on the expiration of his present leave of absence, and will report in person to the Commanding Officer, Fort Riley, Kansas, for duty at that post, relieving Major John R Hoff, Surgeon U. S Army.

Major Hoff on being relieved by Captain Turrill, will report in person to the Commanding Officer, Fort Columbus, New York, relieving Major Johnson V. D. Middleton, Surgeon, U. S. Army.

Major Middleton, on being relieved by Major Hoff, will report in person to the commanding officer of the Presidio of San Francisco, California for duty at that post.

The leave of absence granted Major Alfred A. Woodhull, Surgeon U. S. Army, is extended ten days.

Captain Junius S. Powell, Assistant Surgeon, U. S. Army, is relieved from duty at Fort Randall, South Dakota, to take effect upon the final abandonment of that post, and will then repair to Fort Monroe, Virginia and report in person to the commnading officer of that post for duty.

Major Robert M. O. Reilly, Surgeon U. S. Army will be relieved from duty at Fort Logan, Colorado, and will report for duty as Attending Surgeon in this city, on December 15. 1892.

Captain Alonzo R. Chapin, Assistat Surgeon, U. S. Army, is relieved from duty at Fort Yates, North Dakota, and will report in person to the commanding officer, Fort Hancock, Texas, for duty at that station.

Captain Eugene L. Swift, Assistant Surgeon, U S. Army, is relieved from duty at Fort Grant, Arizona, Terry., and will report in person to the commanding officer, Fort Yates, North Dak., for duty at that staton.

Lieutenant Colonel Frances L. Town, Deputy Surgeon General, U S. Army, is relieved from duty at the Presidio of San Francisco, Cal and will report in person to the commanding officer, Fort Porter, N. Y., for duty at that station.

Major Egon A. Kœrper, Surgeon U. S. Army, is relieved from duty at Fort Walla Walla, Washington, and will report in person to the commanding officer, Willets Point, N. Y. for duty at that staton, relieving Major Clarence Ewen, Surgeon.

Major Ewen on being relieved by Major Kœrper will report in person to the commanding officer, Fort Walla Walla, Washington, for duty at that station.

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Original Articles.

THE USES AND ABUSES OF COCAINE WITH REFERENCE TO MUCOUS MEMBRANES ESPECIALLY.

By ARTHUR G. HOBBS, M. D.,
EX-PRESIDENT OF THE AMERICAN RHINOLOGICAL ASSOCIATION, MEMBER OF THE AMERICAN MEDICAL ASSOCIATION, OF THE GEORGIA STATE MEDICAL ASSOCIATION, THE ATLANTA SOCIETY OF MEDICINE, ETC., ETC., ATLANTA, GA.

Since I received my first twenty grains of the hydrochlorate of cocaine (a part of the first two drachm package that arrived in New York), I have used many ounces; perhaps, altogether, by myself and assistants, as many pounds as my original package contained grains.

It will not be amiss for me to say in the beginning that I now have very different opinions of its uses, from those I entertained during the first year of its advent. However, one of my original opinions of its applicability has only become more and more confirmed with my increased use of it; and that is that its utility is principally confined to its local application to mucous membranes.

The softer the mucous tissue to which it is applied, the sooner is its effect reached and the less the quantity necessary; and, as a consequence, the quicker and more decided is the toxic effect when its application is persisted in to this extent.

The general symptoms, however, are, everything else being equal, much oftener present in proportion to the area of membrane surface involved, than in proportion to the strength of the solution applied. Hence, sprays of a weak solution are liable to produce toxic symptoms, when much stronger solutions can be applied with a saturated cotton probe or wad, to a limited area, almost with impunity.

The constitutional effects of cocaine are manifested by a feeling of faintness—it may be even to the loss of consciousness—a trembling of the limbs, a pallor of the face, etc., any or all of which may appear in one minute or in fifteen minutes after the application to a large surface. Again, these symptoms may be produced by a small quantity of a one per cent. solution in one individual and not in another; even if in the latter both the strength and quantity be ten times multiplied. I have never yet reached a conclusion as to the average amount of cocaine that is necessary to produce the constitutional symptoms; neither do I ever know, the first time I use it, how to estimate the individual's susceptibilities.

Every individual seems to be a law unto himself as to the quantity necessary in his own case to accomplish complete local anæsthesia; and even in the same person the amount will vary at different times, with no apparent cause. Under similar circumstances I find it impossible to reach a complete local anæsthesia in some, short of the toxic symptoms; when in others, one-tenth of the amount will render the application of a galvano-cautery absolutely painless.

To obviate the unpleasantness and delay caused by the constitutional symptoms, it is my custom to administer a stimulant of brandy or whisky at their first indications, and make the operation quickly and, always under such circumstances, painlessly. When it is found by trial that one bears the drug badly, it would be well to always give a stimulant before the second application is made.

I am sure that the last thousand galvano-

cautery operations I have made would represent a much greater per cent. that were absolutely painless, than the nearly three thousand cauteries that preceded. Perhaps this has been due to my greater familiarity with technique of cocaine applications in the more recent cases.

In some, its effects in the superior pharynx are peculiarly distressing, more especially at the first application, but less and less so afterwards. However, it is well to remember this and avoid it, when making local applications above, by not allowing the solution to gravitate from the cotton plug.

The time necessary for cocaining a mucous membrane is perhaps as indefinite as the strength of the solution; both due to that unknown quantity—the individual. Approximately, however, four to ten minutes and a four to ten per cent. solution for a small surface may be regarded as an average. If the intention is to produce the effect over a small surface only, as in galvano-cautery operations, a concentrated solution—ten to twenty per cent.—should be used, and the result expected in four to eight minutes. If, however, a general turgescence of any membrane should suggest the use of cocaine, then a spray of a very weak solution—a one or two per cent.—should be expected to accomplish the desired result in one or two minutes. In either case, the general effects may appear without any warning and mar the anticipated good results or, at least, render an otherwise easy operation, tedious and unpleasant.

It has been my custom, from the beginning, to make my solutions at the moment I use them and to vary their strength according to the case, and as I use no weights or measures, I never know, only approximately, the strength. The range is so great that I hesitate in stating it, as I have not space to give my reasons for sometimes using a one grain to the minim solution, and again, only a one grain to five hundred minims. As a general rule, however, the strength should be in inverse proportion to the surface to which it is applied. Since my many disappointments with ready-made solutions of cocaine, during the first few months of its advent, I have never risked any solution that had not been recently dissolved.

In case it should be necessary to dissolve a large amount, it would be well to add boric acid for its preservation, in a proportion of about one grain of the latter to ten grains of the former.

For safety, it is best to supply the drug instead of giving the patient a prescription to have filled and bring with him for an appointed operation. The operation will thus be less magnified in the patient's mind and he will be less liable to familiarize himself with the proportions and uses of the drug, should the temptation to use it himself arise afterwards. For these reasons, I do not, in any instance, give a patient a prescription containing cocaine as a leading ingredient.

As an ingredient in sprays, I find it abused more, perhaps, in hay fever prescriptions, than anywhere else. This is true also where it is prescribed in the form of powders for this disease.

The turgescent condition of all the mucous membranes of the upper respiratory tract, especially in the nasal turbinates, that is always present in hay fever patients, is so quickly palliated and rendered bearable, that the temptation is great to prescribe cocaine in some form for the patient's own use; but it is a dangerous experiment and one to be ventured upon only in exceptional cases.

During the past few years I have seen many journal articles that claimed for it a decided aphrodisiac effect, while my observations have been universally to the contrary. It will not be departing too far from the subject if I mention the effects of cocaine (through the mucous membranes) upon two cases of priapism, notwithstanding the fact that the results in these cases were reached through the general systemic impressions of the drug. The two young men, who were the victims of this rather unusual disorder, came under my observation by accident, and at intervals of about three years, each came to my office in a carriage for a coincident nasal and pharyngeal inflammation. Cocaine dissolved in vaseline, together with a small quantity of campho-mentholine, was sprayed into the nasal and pharyngeal cavities to the great relief of all the unpleasant symptoms in these regions.

But this was not all. In the first case, to my surprise and to the patient's great joy, the other and more painful malady disappeared within ten minutes. In the second case the symptoms were almost exactly like the first, and the patient's de-

light was greater than my surprise, as I was this time anticipating a similar result from the same treatment. The relief of the priapism, in both cases, remained permanent.

In both instances, the usual treatment for such cases had been resorted to apparently without result for 24 and 36 hours respectively, only to be completely relieved by a cocaine spray used upon a distant mucous membrane for a coincident malady. It would seem that in these cases cocaine acted as an anaphrodisiac, and it should not be surprising when we remember that its primary effect is to reduce a turgescence of the turbinates, and that these tissues are analogous in many respects to the erectile tissues that are involved in priapism.

I desire here to emphasize most decidedly one contra-indication in the use of cocaine as a collyrum, and that is that *it should never be used when an abrasion of the cornea exists*; nothing in the form of a collyrium is more deceptive, as it is also most grateful to a denuded corneal surface.

The cornea is covered with the epithelial layer of the conjunctival mucous membrane only; here no middle layer proper exists whence it can derive its nutrition, hence it quickly looses its vitality when subjected to this local anæsthetic. So also the outer layer of the cornea, receiving its nutrition by imbibition only, seems to be even more susceptible to the destructive effects, of cocaine.

I have seen a number of cases, during the last few years, (especially since this drug has been introduced into general use) in which the cornea has been greatly damaged by its constant and frequent introduction, for no other purpose than the temporary relief of pain; but unfortunately the relief thus produced proves to be a delusion and the destruction produced upon the cornea is only masked for the time by the anæsthetic effects.

I have especially seen these bad results in the cases of physicians who had themselves persisted in its use for the comforting effect to their own eyes, both during the presence of foreign bodies on the cornea and after their removal.

Cocaine is contra-indicated also in any corneal inflammation and should not be prescribed beyond the acute stage of any form of conjunctivitis.

I have had but little experience in its use beyond its local application to mucous membrane surfaces, because I have never believed that its range of utility extended any further, except, perhaps, in a very few instances, hence I know very little of its general usefulness hypodermically, as it has usually seemed to be quite as painful to introduce it in this manner, as the pain of the minor operation would be, especially when we consider the limited quantity that can be borne when it is introduced so directly into the circulation.

I have sometimes however injected the solution into the tonsilar mass to hasten anæsthesia, but the toxic effects follow so quickly after its introduction into the circulation in this manner, that I always hesitate to resort to this means in an untried subject.

Yet in some operations on the eye as in tenotomies, iridectomies, cataract operations, etc., I frequently use the syringe for introducing a weak solution—1 to 2 per cent.—sub-conjunctivally, on subjects that do not succumb to a 4 to 6 per cent. solution applied superficially for fifteen to twenty minutes at short intervals.

In preparing for a tonsil amputation, I use a cotton probe saturated in a five to a fifteen per cent. solution, and apply it to the whole surface of the mass once; then I send the patient to a waiting room and perhaps in the meantime—about eight or ten minutes—see another patient, then make a second thorough application and wait three to five minutes before I use my knife and hook tonsilotome.

Occasionally, in an extremely sensitive patient who has not by this time exhibited any of the general effects, a five per cent. solution may be introduced into the tonsilar mass with a long hypordermic needle before proceeding to amputate.

In nearly five thousand tonsil amputations (four-fifths of which were done under cocaine) I never had a dangerous hæmorrhage and not more than a dozen cases that even proved to be troublesome from this cause.

Undoubtedly, cocaine exerts a decided hæmostatic effect upon hypertrophic tissue, especially when it has thoroughly saturated the mass before an incision is made. Yet, after the solution of continuity, its blood-staying qualities are not equal to many other hæmostatics, and it cannot be relied upon for this purpose.

During the first years of its use, this drug was vaunted by many writers in the medical journals as a great panacea—as the sovereign remedy for ear-ache but naturally, disappointment followed quickly in the practice of these theorists, who seemed not to remember that the outer layer of the membrana tympani was not a mucous layer, else they failed to remember the fact that an aqueous solution of cocaine could be only sparingly absorbed through a cutaneous epithelium.

After the rupture or incision of the drum membrane in an acute catarrhal inflammation of the middle ear, when it becomes possible for the solution to reach the membrane involved, the call for relief from pain has already ceased. When it is practical to produce a few drops of a strong solution into the middle ear cavity through the eustachian tube, the pain is usually relieved at once; but as it is not always possible to do this on account of the swollen mouth of the tube and as another question arises here beyond the scope of this paper, as to the advisability of the trial in any case, cocaine cannot be regarded as so great a panacea in ear-ache as it was first claimed to be by many who wrote only upon faulty theoretical grounds.

I have occasionally heard of cocaine habitues, all of whom were physicians, but I have had no personal experience with these unfortunates. Such cases will be found to be linked with whisky habits in the great majority of instances.

I think, however, that we should always remember the danger of such a consequence when making a prescription containing cocaine, and be guarded when even its suggestion arises.

Like all other drugs that are potent for good, cocaine is also potent for evil. Like fire, it is a good servant but a bad master.

PYLORIC PAIN IN DYSPEPSIA.

Coutaret, according to the *Revue de Thérapeutique Médico-Chirurgical,* advises the following treatment in the pain of dyspepsia:

℞ Saturated chloroform-water.....ʒ iv.
Simple syrup of colombo.....ʒ iss.
Powdered extract of cannabis indica..gr. iiss. M.

Sig.—A dessertspoonful of this may be taken every half hour until the pain is relieved, particularly at the time that the chyme is passing from the stomach into the intestine.

THE INFLUENCE OF TOBACCO ON VISION.*

BY FRANCIS DOWLING, M. D.,
CINCINNATI.

As far back as 1833, a Scotch physician, Dr. McKenzie, of Glasgow, first called attention to the influence which tobacco exerts in the causation of certain kinds of blindness, in these words: I have already had occasion repeatedly to hint my suspicion that one of the narcotic acids, which custom has foolishly introduced into common use, namely, tobacco, is a frequent cause of amaurosis.

During the year 1884, while in Paris, in the eye clinic of Dr. Golezowsky I collected some information bearing on this subject, and more recently I have made a series of examinations of the employees of the principal tobacco factories of Cincinnati, with the same object in view.

I here give a synopsis of my findings in one hundred and fifty of these selected cases.

There were altogether about 3,000 employees in these factories which I visited, about the half of these were females and the other half males. I found that ninety per cent. of all the male employees, used tobacco in some form or other. About twenty per cent. chewed tobacco in addition to smoking liberally of a pipe or cigars; most of them did their smoking in the morning and evening before and after working hours.

One woman aged forty, presented a well marked case of tobacco amblyopia—she confounded the red and green colors of the test with black, and white with dark gray. She also presented a notable diminution of her visual acuteness and said her eyesight had been failing for the past two years. She had been working in tobacco for five or six years but has never used the article in any shape.

Comparatively few of the men examined drank to any great extent, and those who did, drank mostly beer.

A very large number of the men appeared to have a flabby condition of the muscles, and to suffer more or less from anemia. This was particularly noticeable

*A paper read before the Mississippi Valley Medical Association in its 18th Annual Meeting at Cincinnati, October 12 to 14, 1892.

among the female employees who were largely made up of young girls.

The ventilation of the work rooms was, as a general thing, as good as could be expected in establishments of this kind.

The principal colors confounded, by those who were examined were red confounded with pink, dark brown or black, the latter usually in the more pronounced cases; green was confounded with light blue, yellow or black. White was as a general thing confounded with grey of different degrees of intensity, according to the degree of tobacco infection. All of these cases were only affected for the central colors in the test,—the colors in the periphery could be distinguished without much difficulty.

The men examined ranged in age from thirty to sixty years, and were among the heaviest consumers of tobacco in the factories, so that they were among the best subjects that could be had for the object in view, viz: ascertaining the effects of tobacco on the system.

In my first series of examinations, some of the females were included in the list, but with the exception of the case already named, none gave evidence of tobacco poisoning, as manifested by troubles of vision.

Out of over 150 men examined there were forty-five, who showed more or less evidence of tobacco amblyopia, the majority of these, however, were of a light degree, but thirty, however, among the number were pretty well marked cases as they distinctly mistook the red color of the test for brown or black, and the green color for light blue or orange, and in some instances black. They were also unable to make out the white spot in the center of the visual field.

The majority of those who were examined, that is of the whole 150, showed evidence of a contracted condition of both pupils. This was present in a good many who showed no other evidence of tobacco poisoning, but it was marked and persistent in those who showed other well marked evidence of tobacco infection.

Thirty out of the forty-five complained of a gradual failure of vision. Three-fourths of all the men examined were over thirty-five years of age, and the oldest man examined was aged sixty-one years.

Some of the men examined smoked as high as twenty cigars a day. In several instances, the proprietors of the establishments where the examinations were made pronounced themselves skeptical in regard to tobacco having any deleterious influence on the eyes. They were very much surprised when they found that they confounded the colors on the test chart, and were finally convinced that tobacco could have a bad influence on the eye-sight.

When I commenced my examinations, I was under the impression that the constant inhalation of the dust and odor of the tobacco in the workshops would tend in itself to bring about symptoms of tobacco amblyopia. I am inclined to think this hardly takes place, for in my examination, I found that those who did not smoke or chew were uniformly free from troubles of vision of a toxic nature and the females were almost universally free from the trouble, that is, as far as I examined them.

As a result of all my investigations in this department, the following would be a fair resumé of the principal symptoms, which characterize chronic tobacco poisoning, affecting both the general system and the organs of vision:

General Symptoms:—The subjects are light eaters, and the appetite is easily satisfied. A large number have a decided antipathy to meat, constipation is usual, the sleep is usually disturbed, often by disagreeable dreams. They usually have to go to bed late, as they claim in order to be able to fall asleep. They often wake up in a few hours, and are unable to go to sleep for some time. They usually complain of more or less palpitation of the heart and the pulse generally ranges at about 90 or over. On taking any great amount of exercise the muscles feel unusually tired, and the hand often has a characteristic tremble on holding a book or pen. A case in which this latter symptom was particularly well marked came under my treatment recently, in a man who was a heavy smoker, and had pronounced symptoms of tobacco amblyopia in adddition.

Eye Symptoms:—The subjects who usually suffer with tobacco blindness are almost always males between the ages of 30 and 60 years. Exceptions to this occasionally occur, and in my own series of examinations I found one young man aged 19, who presented a well marked case of this trouble. The young man was a most inveterate

smoker and chewer of tobacco. Noyes also states that he treated a boy of 15, who presented a classical case of this disease. The boy was an inveterate cigarette smoker.

There is almost always a gradual but progressive failure of visual acuteness, in in both eyes. This was noticed more or less in a large number of all the cases which I examined.

Luminous objects dazzle the eye-sight, and a bright light is worse for reading by than a subdued one. The patients see better in the evening than in the middle of the day and in this connection Forster cites the case of an old smoker, who in playing nine pins could not distinguish between the upright pins and those that were down, during the bright light of day, but had no difficulty in that direction as evening came on. In addition to this patients often complain of a glimmering mist which covers all objects, especially in a bright light.

These subjects almost always confound colors, for central vision; first in the order comes red; this is generally taken for dark brown, pink or black; next in order comes green. This color is taken for light blue or black. Then in order comes white, which is taken for dark gray or black. Pink to these subjects often looks like blue. It must be remembered that it is only for the central visual field that these colors are confounded; the periphery is usually seen all right.

Myosis:—Persistent contraction of both pupils is generally present, and this was the most frequent of all the symptoms noticed in the cases examined, and we could almost always tell by looking at the pupils in advance of the rest of the examination, that the subject would fail to make out the colors of the test. This symptom was present, in many cases where the men were heavy chewers of tobacco, even when there was very little other evidence of infection.

It would be well here to mention that in some cases, this contraction is so pronounced that it is impossible to illuminate the eye chamber sufficiently to make an examination of its fundus by means of the opthalmoscope, and in consequence this condition may be mistaken for other disease, for a case on this point I am indebted to my friend and former teacher, Dr. Galezowski, of Paris. The case was treated by the Doctor in 1889, and he writes me the particulars under date of last August as follows: A man in the island of Martinique, suffered a diminution of vision to such an extent that he was no longer able to go about without assistance. He consulted a doctor on the island who examined him and said that he had a cataract and advised an operation. The patient's wife took him to Paris and asked Galezowski to perform the operation. The Doctor, before operating, made a careful examination and was surprised to find no trace of cataract.

The patient had instead a marked case of tobacco amblyopia from smoking from 20 to 30 cigars a day. He was placed under appropriate treatment. The use of tobacco in any form was strictly forbidden him as well as alcohol. In about three and a half months the man had entirely recovered the use of his sight, without operation.

It will be well to mention that all the symptoms spoken of are more marked in the case of chewers of tobacco than in smokers. This we can probably explain by the fact, that in the case of chewing, more nicotine is absorbed, than in the case of smoking—for in the latter case a great part of this poisonous agent is volatalized by the heat and escapes with the smoke—while in the former, most of it is directly absorbed into the circulation through the blood vessels of the mouth and tongue.

Lastly, the opthalmoscopic examination of the eyes of those affected with tobacco amblyopia reveals the papilla of the optic nerve to be more than usually red in the early part of the affection, later it appears anemic, especially on the temporal half, and finally atrophy of the disc takes place. It is quite probable that these changes in the papilla are caused by direct action of the nicotine, which enters the circulation, and causes contraction of the smooth muscular fibers, and then diminishing the caliber of the minute blood vessels of the part, irritation of the nerve tissue of this essentially sensitive body takes place at the same time, by the same agent, and this explains the congested condition of the part seen in the early history of the disease. The pressure, etc., caused by the congestion, finally causes a gradual atrophy of the disc and eventually more or less of the contiguous retina, according to the duration of the disease, and the amount of tobacco infection.

Communications.

MYXOMA OF THE NOSE, AND FIBRO-MYXOMA OF THE NASO-PHARYNX.*

BY S. G. DABNEY, M. D.

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Myxomata are much the most frequent of nasal tumors. Zuckerkandl is said to have found one polyp in every eight or nine autopsies, but from his own description it is evident that he included many cases of hypertrophy and of other growths, in his list of polyps. Bosworth in private practice has found one polyp to every eleven cases of ordinary catarrhal inflammation of the nose. In my own experience they have certainly not formed so large a proportion, probably because of the wide prevalence of catarrhal inflammation in this region. Myxomata may occur at any age, but are much most frequent after sixteen. As regards their cause, nothing definite is known; but it is a significant fact that the favorite site for their origin is in the mucous membrane covering and beneath the middle turbinated bone.

McBride and Bosworth both find the exciting cause of nasal myxomata in a "water soaked" condition of the mucous membrane—a condition especially prone to occur in the area just named, partly from the structure of the mucous membrane here, and partly from the narrow space between the middle turbinated and the unciform process, which may easily be closed by a little swelling and thus the bony ridges brought into contact. It is a little strange that recognizing this state of the mucous membrane as the underlying cause, Bosworth nevertheless advises no treatment further than the removal of the growth.

Some years ago Woakes advanced the view that a necrosing ethmoiditis was the exciting cause of nasal polyps. This opinion is not generally held by other surgeons, and has been subjected to much criticism. Lennox Browne, Walsham and Hill at a recent meeting of the British Medical Association, asserted that to find ethmoidal disease at all in this connection, is very unusual, while McKenzie, Bosworth and others, insist that Woaks has confounded cause and effect, and that ethmoidal necrosis when it does exist is the consequence of the nasal polyp, not the cause. This opinion is substantiated by the fact that bone disease is not common where there is but a single polyp, but is to be found where there are a great many, and especially after they have existed for some time.

The most exact investigations into the situation of nasal myxomata have been made by Zuckerkandl. In thirty-three autopsies he found the polyp to originate from the lips of the hiatus semilunaris fifteen times, from the edge of the middle turbinated four times, from the subjacent bony eminences six times, and from the septum three times. The growths on the septum were all sessile and probably were hypertrophies, rather than true polyps, since by other observers the septum has only very rarely been found to be their site, McKenzie stating that the cases reported by Bryant, Leriche, Wagner and Hartman (each one case) were the only authentic instances within his knowledge. The origin of at least two-thirds of nasal polyps at the edge of or beneath the middle turbinated bone has important practical applications in their treatment, since, as an inspection of this region on the dried bone will show, it must often be impossible to reach the base of the polyps without removing a piece of the middle turbinated.

The diagnosis of myxomata is usually easy; their color, consistency, mobility, location and painlessness distinguish them from other growths. The greatest liability to error in this respect lies in overlooking small polyps which are deep situated beneath the middle turbinated. In every suspicious case this situation should be thoroughly examined, a pledget of cotton soaked in a four to ten per cent. solution of cocaine being first packed in under the bone to produce anæsthesia, and to contract erectile tissue.

Where there are several polyps, the mucous membrane covering the middle turbinated is sometimes found to be in a state of myxomatous degeneration, with

*Read before Medico-Chirurgical Society of Louisville, Ky.

irregular polypoid hypertrophies growing from its side and each end. In a small proportion of cases the cells of the ethmoid are continued into the middle turbinated and its anterior end bulges toward the septum; on removing the shell of bone covering this prominence, the cavity will be found occupied by one or more polyps having the appearance of a cyst. I have seen two such cases in my own practice.

The symptoms produced by nasal polyps vary in different cases. Sneezing which Bosworth has found almost always present and very persistent, has, in my patients, been often absent.

A sense of pressure about the bridge of the nose is usually complained of, and when the polyp is large there is obstruction to nasal respiration on that side. Sometimes the only symptoms mentioned by the patient are reflex ones, referring to other organs. Recently a lady consulted me on account of overflow of tears and "weakness" of one eye. She made no mention of nasal disturbance and was greatly surprised when I removed several polyps from the corresponding side of the nose. The epiphora caused by nasal polyps is usually attributed to pressure on the nasal duct, but bearing in mind the soft consistence of the tumor and the bony walls of the canal, it seems to me much more probable that it is due to reflex lachrymation.

Bosworth has found an astonishingly large proportion of polyp cases in asthmatic patients; thus, in thirty-four cases of hay fever asthma there were nine cases of polyps, while of forty-six cases of perennial asthma, eighteen were the subjects of nasal polyps. Not less remarkable are the results of treatment in Dr. Bosworth's hands. Of five cases of hay fever asthma, three were cured and two improved by removing the polyp and straightening the septum, while of eighteen cases of perennial asthma, fifteen were cured and three improved by simply snaring away the polyp. The experience of other specialists hardly agrees with that of Bosworth, either in the large proportion of polyp cases among sufferers from asthma, or in the very favorable results to be obtained by removing the polyp when present. I know of no other statistics on the subject, but the general opinion of writers is that nasal obstruction is far from being always present in cases of asthma, and that when it exists, its removal more often alleviates than cures the disease. McBride, however, relates a case in which the removal of a polyp too small to cause obstruction was followed by immediate and great relief to asthma.

This reflex influence of small growths is now well established and shows the fallacy of the opinion expressed by McKenzie, that polyps requiring treatment are generally between a currant and a grape in size. Various other symptoms have been attributed to nasal polyps; serious organic disease of the eyes, epilepsy and megrim, but no such cases have come into my own experience. The sense of smell and consequently of taste is often impaired, and where mouth breathing is necessitated for a prolonged time, its injurious effects on the throat and lower air passages are likely to ensue. Tinnitus aurium and deafness are often produced by nasal myxomata, but are much more commonly associated with post-nasal polyps, to be presently described.

The treatment of nasal myxoma consists in the removal of the growth, and appropriate applications to prevent its recurrence. The method of operating advised by some, even of the most recent, textbooks on general surgery seems strangely out of place in this day of perfected examination, and surgical technique. Thus, a voluminous work which has recently appeared recommends that the patient should be in the recumbent position, and that the surgeon introducing forceps should grasp the growth and twist off with it a portion of the middle turbinated, and that a general anæsthetic should usually be given. Not a word is said as to the use of the nasal speculum and reflected light to illuminate the nares and accurately locate the polyp. But only by such means is a thorough diagnosis possible. The polyp being seen, a four per cent. (or stronger) solution of cocaine should be applied around and on it, either as a spray or as I prefer soaked in a pledget of absorbent cotton. Used in this way we are less likely to produce constitutional symptoms or to have the cocaine get into the nasopharynx with the unpleasant sensations which that causes. Local anæsthesia and contraction of the blood vessels having been thus induced, a snare should be introduced, the wire loop worked as well as possible around the pedicle of the

polyp and the growth removed. Operating in this way there is usually very little pain and very little hæmorrhage—often none. For anterior growths such as we are now describing, I prefer the reel snare of McKenzie and No. 5 piano wire; the different forms of snare, however, are numerous and most of them are good. So far the line of treatment is well-defined, but as to what further measures are necessary authorities do not always agree. At the last meeting of the American Laryngological Association, the radical treatment of nasal myxomata was the subject of considerable discussion. Sajou Roe, Jarvis, Rice and Mulhall agreeing that in many cases a portion of the middle turbinated must be removed in order to get thoroughly to the point of attachment of the nest of polyps beneath it. Sajou, operates with rongeur forceps and applies electro-cautery; Roe uses the saw of his own device; Jarvis and Mulhall use Jarvis' snare and small searching forceps. The operator, if possible, should have each of these instruments at hand, as each will sometimes be found the best. For removing the edge of the middle turbinated, I use generally the reel-snare. When the edge of the bone cannot be caught in this way the rongeur forceps are used with advantage. I have found this little instrument so useful in various nasal operations, that I wonder now how I did without it. Since severe reaction and, it is said, even fatal meningitis, has followed removing the shell of the middle turbinated careful antiseptic applications should precede and follow the operation. I use the solution of Seiler's antiseptic tablets and sometimes of bichloride of mercury. As an application to the base of the polyp, nothing is better than the electro-cautery, though chromic acid fused into a bead on the end of a probe can be used with equally good effect.

After removing the polyp Cohen recommends washing out the nose with distilled extract of hamamelis in alcohol. Sprays of alcohol, first diluted with three parts of water and gradually increased to pure strength, are also advised by McBride, Griffin and others.

There is another form of tumor largely myxomatous in character, which originates in the nose and hangs into the post-nasal space. It is described by most authors as myxo-fibroma of the naso-pharynx. Such growths in my experience are not usually associated with anterior nasal-myxoma. They are generally single though sometimes bilateral. I recently removed a large myxo-fibroma from each post-nasal passage of a little boy thirteen years old. He had no other nasal affection. The growths were attached, as they usually are, near the margin of the nose posteriorly. I removed them with the Jarvis snare introduced through the nose, and guided by the rhinoscopic mirror. These growths are harder than true myxoma and not so hard as fibroma; they are usually distinctly pedunculated and move about with the movements of the palate and with change in position of the head. Nasal obstruction is generally the first symptom observed; the voice is changed and pressure on the mouth of the eustachian tube often causes deafness and tinnitus aurium. Such growths are generally invisible by anterior examination, and the diagnosis should be made by the rhinoscopic mirror. When this cannot be used, the finger introduced behind the palate and directrd to the post-nasal cavities will give knowledge of the tumor and its consistence. But usually, even in children (not infants) a rhinoscopic view can be obtained. The attachment and consistence of the growth can be ascertained by passing a probe through the nose, directing its manipulation with the rhinoscopic mirror; if the probe is wrapped at the end with absorbent cotton and dipped in a four to a ten per cent. solution of cocaine, it prepares the parts at the same time for operation.

Such tumors should be removed by the snare,—I prefer to introduce Jarvis' snare through the nose; during introduction the wire should be drawn into a small loop and when the snare is in place, it should be pushed out to the required length. Of course cocaine should first be applied which can best be done by the probe introduced as just described.

In the case of one, a very nervous lady, I found much assistance from a dose of valerian given by her family physician just before she came to my office.

If, for any reason, the snare cannot be used, the electro-cautery may be applied either through the nose or post-nasally. Where the growth hangs down over the edge of the soft palate, it may be grasped

with forceps and pulled out, but this method is inferior to the snare.

There is not much tendency to recurrence, but as a matter of precaution it is well to touch the place of attachment of the polyp with chromic acid or the electro-cautery.

The following case of post-nasal polyp hanging into the pharynx and causing persistent vomiting, with great emaciation and exhaustion, presents some unique features: A negro man between twenty-five and thirty years old referred to me through the kindness of a general surgeon to consult whom he had come from a neighboring county. The patient was extremely emaciated and so weak that he could walk only with difficulty, and with the help of a stick. He breathed through his mouth and spoke as if his mouth was full. On looking into his mouth a tumor was seen lying on the tongue and looking exactly like a double tongue. At first sight it seemed to be attached low down in the pharynx, but more minute examination showed it to hang from the post nares and to be bent over the palate. The portion in the mouth was reddish brown in color, firm in consistence and free from sensibility on touch or pressure. It was very movable and evidently attached by a narrow base. The patient gave a history of nasal obstruction for about two years, and of nausea becoming more and more intense for the last six months, until for some eight weeks past he had been unable to retain anything on his stomach and his emaciation and weakness were the consequence. On the day before I saw him in the course of his vomiting he had thrown up into his mouth the tumor which now rested on his tongue. Being uncertain as to the vascularity of this tumor, I determined to remove it with the electro-cautery loop; the wire was introduced over the end of the growth in the mouth and pushed up as far as possible into the post nasal space; the mass so included was then burnt off without pain or hæmorrhage. The remaining base of the tumor was destroyed by the electro-cautery introduced through the nose. It was attached near the posterior margin of the right nasal chamber. The portion removed through the mouth was submitted to Dr. Louis Frank for microscopic examination and he reported as follows: "A tumor somewhat pear shaped, three and one-half inches long, and three-quarter inches in diameter in its thickest part, having at the ends a soft feeling, but in the central part feeling hard and nodular. On section the tumor is composed of numerous cystic (?) cavities filled with a cheesy material that is non-adherent and which easily rolls out. Microscopically the section shows large alveoli or cyst cavities filled with a substance partly cellular (round cells) and partly composed of a granular detritus, the remains of pre-existing cells. These cells stain very poorly. The cyst wall is lined with columnar epithelium, some goblet cells being present. The walls of the cyst are composed of a dense, hard fibrous tissue, containing few blood vessels. Section through portions of the tumor not containing the cyst, show only a fibrous structure.

"Diagnosis: Fibro-cystic polyp."

In the light of this report and knowing the tendency to cystic degeneration, characteristic of nasal myxoma and myxo-fibroma, it seems to me probable that this growth was a genuine myxo-fibroma which had undergone cystic degeneration.

THE PATHOLOGY OF OLD AGE.*

R. H. GRUBE, M. D.

The term old age is a very indefinite one for the reason that the systemic changes which cause the senile state take place at different ages in different people. The broken-down, decrepit day-laborer, whose life has been one of hard work and poor nourishment is more senile at fifty than a Gladstone at eighty. It is this senile condition then that will receive our consideration this evening.

As a basis for what I have to say I have taken the reports of the surgeons of the five largest National Military Homes, and my own observations during several years' service in the largest home. These five homes have an aggregate membership, in round numbers, of twenty thousand old soldiers, the average age of whom is about sixty-five. The total number of deaths at these homes occurring during the year ending June 30th, 1891, was 950. Select-

*Read before the Allegheny County Medical Society.

ing some of the principal causes of death they are as follows:

Heart lesions	151
Pulmonary Tuberculosis, including Fibroid Phthisis	122
Cerebral Hemorrhage	67
Senile Debility	62
Cancer	36
Bright's Disease	37
Pneumonia	37
Meningitis	20

As I will revert to these figures from time to time, I will not comment on them here.

I will follow the physiological plan in treating of the subject before us; but before taking up the individual systems I will call your attention to the senile state in general. The senile state is essentially one of general atrophy; the stature and weight decrease; mental and nervous activity lessen; and hair follicles atrophy as do the gladular and muscular tissues throughout the body. The only general tissue which does not atrophy is the connective tissue which, being nature's repairing cement predominates everywhere. This senile state is not pathological but physiological, for the person may have all of these evidences of senility and yet have good health.

Speaking in the language of the evolutionist we may say that the person who has resisted the enemies of life until he has reached old age, has demonstrated his fitness to continue to live until the natural period of human life, so we find in old age comparative immunity from infectious diseases. In my list there no case of smallpox or typhoid fever and none treated. However this rule is not without exceptions, Louis XV. of France died of smallpox at the age of sixty-five, and I have seen varioloid in a patient over eighty. In this connection may be noted the large toleration of morbid processes and the lack of sympathetic reflexes rendering these processes so obscure that they are often overlooked. I have many times had to bear the mortification of a post-mortem diagnosis because of this, and that too, after a most diligent search for the cause of the trouble. I call to mind several cases illustrating this point, some of which I will relate briefly. The first of these was that of a very old man, with a peritonitis caused by a perforated cæcum. He suffered no pain. I aspirated several times, removing two or three pints of most offensive pus each time, and the patient finally died of exhaustion. Another was a perforating ulcer of the duodenum—post-mortem diagnosis—where the contents of the stomach escaping caused adhesive peritonitis, burrowed a channel and "pointed" two inches below the umbilicus. A third case was one of cerebral hæmorrhage causing deep coma, and death in seven hours. The hæmorrhage was in the interior of the Pons Varolii and had completely destroyed the tract of connection between the brain and cord. We see the lessened sympathetic reflex, too, in the narrowed variation of the temperature even in inflammatory conditions. A temperature of 103° is unusual, and I scarcely remember to have seen it at 104°. Nor is the temperature lowered as might readily be supposed. A lowered rectal temperature in old age will most certainly indicate a lesion of some sort, usually visceral. These conditions render diagnosis in diseases of old age difficult, and, as I have already said, many times the real trouble is not discovered at all during life. Thus a patient in one of my wards complained of all sorts of aches and pains with nothing definite enough to base a diagnosis on, and came to be looked upon as a chronic grumbler. He died unexpectedly and the autopsy showed an abscess on the under surface of the liver, which had burst into the peritoneal cavity.

While diagnosis is rendered more difficult in old age, the diligent and skilful searcher will be more apt to find the morbid process at this age than any other, because they are more marked, as the dead-room abundantly testifies.

That was a wise saying of Wilks, that "a man is no younger than his arteries." I have already remarked the senile condition is essentially a general atrophy. In this the heart is to be excepted, as it alone of the muscular system is hypertrophied. The causes for this is the lessened elasticity of the arterial walls and the narrowing of the arterial lumen and the deposit in the arterial coats of atheromatous products, requiring a greater force to propel the blood through the vessels. That disease of the circulatory system is the greatest source of danger in old age, is testified to by my table. Of the 950 deaths, 151 were from the various heart lesions, and 67 from cerebral hæmorrhage, 218 in all. Atheroma is the chief disease of the circulatory system, and is often attended by extensive calcification of the aortic valves, interior of aortic walls, and the coronary arteries.

Next to atheroma and its attendant phenomena, fatty degeneration of the heart is the most frequent morbid heart condition of old age. We must here distinguish between fatty degeneration or the change of muscular tissue into fat, and the deposit of fat between the normal muscular fibres. The presence of the arcus senilis is said to be diagnostic of fatty heart. I have never verified this point. A better diagnostic sign is the weakness or absence of the systolic sound which, being mainly produced by muscular contraction, is impaired. Fibroid degeneration also occurs. In this condition the muscular fibres are replaced by fibrous connective tissue. Either form of degeneration produces sudden death, either by rupture of the heart wall or simple paralysis from over distension. I may say in passing that sudden death is nearly always caused by heart failure and very rarely by cerebral hæmorrhage, where, though the hæmorrhage be extensive, the patient may live several hours or even days.

As the lungs are constituted of the most delicate of tissues, we would natural expect marked changes in them in the senile period. The first thing that strikes one on opening the chest of an old person is the marked pigmentation of the lung surface, giving it a mottled black and pink color. This pigmentation is a deposit of carbonaceous particles having been inhaled. The microscope shows a partial disappearance of the alveolar septa causing an enlargement of the alveoli by partial coalescence. This with the fixation of the chest, another senile change, accounts for the emphysema that old people experience on making exertion. Another thing worthy of note is revealed by autopsies made on the bodies of old people, and that is the large number of old tubercular lesions which were not suspected during life. These lesions consist of pleuritic adhesions, old cicatrized foci and scattered gray tubercles. Active tuberculosis is not a prominent disease in old age, and when it exists it is apt to be exceedingly chronic. Of our 950 deaths, there were but 122 from phthisis and fibroid phthisis together. As further showing the truth of this statement the tenth U. S. census showed that of 91,270 deaths from consumption during the census year 25,610 were of persons between 20 and 30, while but 8,222 were over 65. Again of a block of 2,800 examinations—carefully made—for admission to the National Military Home, but 260 were found to have clear indications of tubercular impairment of the lungs.

The statement that "pneumonia is the scourge of old age," made by high authority is not borne out by our figures, as but 37 of the 950 deaths were caused by this disease. Loomis makes the astonishing statement that nine out of ten of those who die after the age of 65, die of pneumonia. Upon what such a statement is based I cannot see. Nor is lobar pneumonia different in any marked degree from the same disease in younger people. The initial chill is not so marked nor is the temperature so high, but the crepitant or more generally subcrepitant rales, the rapid breathing and the solidification are present and would be found if looked for. I never regard the examination of an old person complete, no matter what the trouble until the chest has been examined.

The greater toleration and lessened sympathetic reflexes spoken of before, mask the subjective symptons of the patient sometimes unless the physical examination be made. Neither is the prognosis in these cases much graver unless there is great debility from some pre-existing disease, when pneumonia is but the closing act. Two other facts are worth noting in this connection, one is that defervescence by crisis is rare among the aged; and the other is that muttering delirium is almost prognostic of a fatal termination.

The changes in the alimentary canal are quite as well marked as those in any other part of the body. The teeth are lost; the mucous and peptic glands of the stomach are lessened in number and size; the intestinal villi are fewer and the intestinal wall thinned, except the colon, which is frequently dilated and its walls thickened by the replacement of the muscular tissue by connective fibrous tissue. As a sequence of these changes we are not surprised to find a weakened digestion and poor assimilation of food in these people. Constipation is an almost constant accompaniment of old age. The frequency of cancer especially of the stomach and liver is shown by the large number of deaths due to cancer, 33 out of 384 reported from the Central or Dayton branch alone. According to my own observation the majority of these were doubtless of stomach and liver. Of the various diseases of di-

gestion and assimilation I can say nothing here, as the subject is too extensive. You all know how difficult they are to handle and can subscribe heartily to Abernethy's statement that a man cannot be induced to attend to his digestive organs, till death, or the fear of death stares him in the face." Diarrhœa is a frequent and troublesome disease in old age and sometimes one most difficult to control. As an adjunct to the alimentary canal the liver may be considered here. Fatty degeneration or the "nutmeg liver" is almost always present in senile autopsies. Cirrhosis is extremely rare, which I think remarkable in the face of the generally accepted theory of alcoholism as the chief etiological factor in its causation, since a large number of the men in the military homes are confirmed alcoholics.

Bright's disease, like phthisis, is apt to be chronic with old people and is generally of the fibroid character, and so is likely to go undiscovered, as the symptoms are so masked as to be misleading, and the patient be treated for indigestion, neuralgia, rheumatism, etc. At the risk of boring you I will give the history of one such case in detail: W. R., age 70, had been under treatment for about six months for chronic dyspepsia. Gives history of long-standing rheumatism. Complains of pain in stomach; persistent vomiting and headache and insomnia; no treatment seemed of any avail in relieving his nausea. He was emaciated, abdominal veins enlarged and liver seemed contracted. Repeated examinations showed both albumen and casts, but in moderate quantities only. Patient finally died of exhaustion. Autopsy: Body very much emaciated; lungs œdematous; hypertrophy of left ventricle, valves of left heart and commencement of aorta studded with minute patches of atheroma; liver contracted to little over half its normal size; walls of stomach thicker than normal and more opaque; colon contracted throughout entire length, at some points seemingly almost closed, the coats thick and fibrous; the wall of bladder also thickened and opaque; left kidney contracted and fibrous on section; right kidney larger, but also fibrous, cysts scattered over surface of kidneys, microscopic examination of kidneys shows glandular and epithelial elements crowded and replaced by fibrous tissue; the walls of the arteries thickened and their lumen diminished; 37 of our 950 deaths were caused by Bright's disease. Of the other morbid conditions of genito-urinary tract I need only mention the senile prostate which, with the allied cystic troubles, belongs to the domain of the surgeon.

The most distinctively senile change of all is the degeneration of the brain and nervous system in general. In the brain the sulci become shallower, the gray matter thinner, and the brain as a whole shrinks. This shrinking is compensated for by an increase of the ventricular fluid and the subarachnoid fluid which on exposing the brain surface has an opaline appearance; corpora amylacea appear in the thinned cortex. In the cord and nerve trunks many medullary sheaths disappear, giving the sections the appearance of being full of minute punctures. The conductivity of the nerves is lowered and consequently reflex action is lessened. There is gradual loss of mental power, memory and attention suffering most. An interesting point here is, that the memory for events long passed, is better than for more recent events. The old persons will tell you in tiresome detail events which happened when they were young, but cannot remember what they had for yesterday's dinner. When these changes are exaggerated we have either softening or sclerosis, ending, of course, in dementia; or in the spinal tract scleroses of various ones of the physiological tracts. Of the changes in the nerves of special sense I need not speak.

And now, gentlemen, we will turn from a prosaic, and to me not very satisfactory, picture of the changes of old age, to a pen-picture drawn by a master hand.

"The sixth age shifts
Into the lean and slippered pantaloon,
With spectacles on nose, and pouch on side,
His youthful hose, well saved, a world too wide
For his shrunk shank; and his big manly voice
Turning again toward childish treble, pipes
And whistles in his sound: Last scene of all,
That ends this strange eventful history,
Is second childishness, and mere oblivion;
Sans teeth, sans eyes, sans taste—sans everything."

The Southern Surgical and Gynecological Association will hold its fifth annual meeting in the city of Louisville, Tuesday, Wednesday and Thursday, November 15, 16 and 17, 1892, under the presidency of Dr. J. McF. Gaston, of Atlanta. Members of the medical profession are cordially invited to attend.

TWO PRACTICAL SUGGESTIONS FOR ANALYSTS OF URINE.

By LOUIS FAUGÉRES BISHOP, M. D.

Use a proper specimen glass. Three years ago, when junior assistant at St. Luke's Hospital, I became dissatisfied with all the forms then in use, and, after unsuccessful search for one that was satisfactory, I finally designed one for use in the hospital. This has proved very satisfactory to each succeeding generation of juniors and has been adopted at other hospitals.

The "St. Luke's model" consists of a cylindrical glass resembling that commonly used for taking specific gravity, but larger and constructed with a wider foot and a lip for pouring. The bottom is slightly concave instead of the convex form that the maker naturally gives to such vessels unless warned not to.

The advantages of the cylindrical over the usual conical form are practical and important. The specific gravity can be taken without disturbing the sediment, and the bulk of the sediment can be more easily estimated.

Every hospital interne falls into the habit of completing his analysis, except the microscopic work, and then doing that with greater or less care as indicated by the previous tests. With the conical form of glass this is attended with serious disadvantage, as the urine must be put into another vessel to find its specific gravity. Another disadvantage of conical glasses is that casts adhere to the sides in settling.

The best practical method for estimating the quantity of sugar in urine is by the fermentation of a specimen until the sugar is entirely destroyed, and then determining how much has been disposed of.

Take two four-ounce bottles of urine; cork one tightly; into the other drop one quarter of a cake of compressed yeast (Fleischmann's). Stand in a warm place until the glucose in the latter has been destroyed as shown by Fehling's test. The number of degrees of difference in specific gravity will equal approximately the number of grains of sugar to the ounce of urine.

The specimens might be weighed and the sugar estimated by a simple arithmetical calculation, but the use of the urinometer is really only a simpler method of weighing. The degree-grain ratio expressed above is found to be nearly correct (Roberts).

I have devised the following formula which can be used in the intervals between the estimations in well-marked cases of diabetes: Divide 880 by the number of ounces of urine passed in twenty-four hours. To the result add 1,000, and subtract the sum from the specific gravity of the urine. The result will be the number of grains of sugar to the ounce of urine.

The primary number, 880, may be, for greater accuracy, altered to suit exactly individual cases as determined by experiment.

For example, suppose a patient to pass 100 ounces of a specific gravity of 1.030. $\frac{880}{100} + 1{,}000 = 1{,}008.8$. $1.030 - 1{,}008.8 = 21{\cdot}2$. The patient has about twenty-one grains to the ounce. Now, if in this individual case the result was found to be too far from truth, a suitable number would be substituted for 880, which, though the best coefficient for general use, yet is not so good for particular cases as one that may be determined by experiment.

SAW-WOUND OF THE ELBOW.

A. M. CARTLEDGE, M. D.,
LOUISVILLE, KY.

Several weeks ago a young man while engaged at some work in a saw mill, fell across a circular saw striking his arm, the saw cut extending across the posterior aspect of the elbow joint in a transverse direction splitting down through the olecranon process, and nearly through the condyle of the humerus; the joint proper was not disturbed; at least you could see the action of both bones of the forearm. It was a typical case for ordinary resection of the joint: After, however, examining more carefully, I concluded I would drain the joint and practice a little experimental surgery on it, having such faith in thorough drainage and asepsis. I drew the triceps down, getting the proper approximation, stitching it with about eight or ten sutures to the base of the olecranon process, which had been entirely sawn through; washed it out with 1-5000 bichloride solution, and put the arm up in not quite complete extension, thinking that if ankylosis occurred, I would have an

arm that would have the carrying power developed in a most marked degree. Drainage tube was removed on the tenth day; the dressing I removed on the fourteenth day, that is the second dressing, and was surprised to find the wound nearly healed, pronation and supination perfect.

This case, I think, from a surgical standpoint, is extremely interesting, and, as far as I know it is entirely unique. As I understand, this class of injury is always subjected to resection.

SYMPHYSIOTOMY, WITH THE REPORT OF AN OPERATION.*

By BARTON COOKE HIRST, M. D.

Symphysiotomy has as remarkable a history as any procedure in surgery. Suggested for the first time in the Surgery published by Pineau in 1598, and first performed upon a living woman in 1777, the idea may be said to be three hundred years old, while its practical application dates back more than a century.† From the year of the first operation until 1858 symphysiotomy was performed 85 times in different parts of the Continent of Europe and once in England with a mortality of 33 per cent. The frequency of the operation diminished after the first few years until in 1858 it had practically died out. It was revived, however, in Italy in 1866, and in the succeeding twenty years 70 operations were performed with a mortality of 24 per cent. Italy continued to be the exclusive field of the operation until a year ago, when it was again tried in Paris by Pinard, whose interest in it was aroused by a visit of Spinelli from Italy. Ten operations have since been performed in Paris, two in Dresden, and one in Strasburg. From January 1, 1886, there have been 52 operations with only a single death, due to septic infection before the operation was undertaken. Twenty-three symphysiotomies have been done already this year, and the last 34 women have all recovered.

We owe the introduction of symphysiotomy in this country to Dr. Robert P. Harris, who, as well known, has long been interested in the subject, and at the recent meeting of the American Gynecological Society in Brooklyn read a paper tracing the development of the operation, showing by the most laboriously collected statistics the present brilliant results achieved by it, and demonstrating, by the description of typical cases, its utility in labors otherwise insuperably obstructed by a contracted pelvis.

Ten days after Dr. Harris's paper was read, on September 30th, the first operation in this country was performed by Dr. Charles Jewett, in Brooklyn. Three days later it was again performed at the Maternity Pavilion of the University Hospital in this city.

The position of symphysiotomy is now established beyond a doubt. Its modern revival I believe to be the most important advance in obstetric surgery since the general adoption of abdominal section for the treatment of early extra-uterine pregnancy. It is applicable in contracted pelves with a conjugate over 67 mm., and, therefore, should be the method employed in almost all cases of the kind in this country, for a greater contraction of the pelvis is rarely seen among us. It should, moreover, almost entirely displace the Cesarean section for a relative indication. It is a much simpler, an easier, and a safer operation. This is also the opinion of Leopold, who cannot be accused of prejudice against Cesarean section, with his brillant record in that field.

There is and will be for some time, perhaps, an objection to the operation from those who have had no experience with it, on the ground that sufficient space cannot be thus gained. In answer to this objection is the fact that the pubic bones may gape 7 cm. after their separation, and the statement of Morisani, that the conjugate is thereby increased from 1.3 to 1.5 cm. But an absolutely conclusive answer is furnished by the subjoined clinical records of some typical cases.

*Leopold's First Case.**—A dwarf, 135 cm. tall, with the following pelvic measurements: Sp. il., 22 cm.; cr il., 24 cm.; tr., 28 cm; conj. ex., 17½ cm.; conj. diag., 8¾ cm.; conj. vera, 6¾ cm. She had been delivered thrice previously, twice of dead children, once by the induction of premature labor. After a labor of seven hours and twenty minutes, ushered in by rupture of the membranes, symphsiotomy was performed with the head above the brim. In ten minutes the

*Read before the Philadelphia County Medical Society, October 12, 1892.

†R. P. Harris: Amer. Syst. of Obstet., vol. ii. p. —

*Centralbl. f. Gyn., 1892, No. 30.

child was extracted with forceps. The head was of normal size (transverse, 9¾, 8¼; circ., 34).

*Leopold's Second Case.**—A woman, delivered once before by craniotomy. The pelvic measurements were as follows: Sp. il., 22; cr. il., 25; tr., 30½; conj. ext., 16; conj. diag., 8½; conj. vera, 6¾. Labor began in the evening; membranes ruptured seven hours later; operation three hours later with head above the brim. Extraction of the child in ten minutes with forceps. The head had a circumference of 35¼ cm.

Porak's Case.†—A primipara with rachitic pelvis, conjugata diagonalis being 9.6 cm., and pelvis presenting some asymmetry, very likely from scoliosis. Labor began on June 10th. About twelve hours later the membranes ruptured, and from eight to ten hours afterward the os was completely dilated. The head rested above the brim of the pelvis. Forceps was applied, but all efforts to engage and extract the head failed The symphysis was opened, and the head then extracted "with the greatest ease" by forceps Recovery.

Freund's Case.‡—A woman in labor six days; water drained off for two days. After opening the symphysis the head was delivered in fifteen minutes without instruments. There were two previous deliveries, one of a dead and one of a living child. The pelvic measurements were: Sp. il., 24½; cr. il., 27; tr., 31; conj. ext., 18½; conj. diag.. 10 cm.; conj. vera, 8¼. the child's head after birth was found unusually large and hard. B. T., 10 cm.; B. P., 11 cm.; F. O., 12 cm.; M. O., 14 cm.; S. B., 10 cm Circumference, O. F., 37 cm. Recovery.

Jewett's Case. §—The first symphysiotomy in America, performed by Dr. Charles Jewett, of Brooklyn, September 30, 1892. Woman, a native American, primipara, fell in labor, September 30, 1 o'clock, A. M.; at 10 A. M. the occiput appeared at the vulva, but was held fast by an approximation of the ischiac tuberosities, reducing the bisischiac diameter to three inches. Nine hours later Dr. Jewett first saw the patient. The forceps had been vigorously used in vain Symphysiotomy was performed two and one-half hours later, or eleven and one-half hours after the impaction of the head at the outlet. Delivery was effected by supra-pubic pressure and by shelling the head out with the fingers in the rectum. The woman is now in good condition, but unfortunately the child died twenty-four hours after birth, from the compression to which the skull had been subjected during its long impaction in the pelvis.

The University Maternity Case.—A German woman, aged nineteen, pregnant for the first time, was admitted to the University maternity, September 24th. The examination by the resident physician and the students showed the child to be presenting by the head, the back to the right The pelvic measurements were: Sp. il., 25 cm.; cr. il., 27 cm.; tr., 30½ cm.; conj. ex , 18 cm

The internal examination made by myself just before operation showed the conjugata diagonalis to be 9½ cm.; conj. vera, 7¾ cm. The girl fell in labor Saturday morning, October 1st. The pains, recurring all day, on Sunday became very vigorous. On Monday morning, when my attention was first called to the case, the contraction-ring was high, the uterus stood almost straight out from the body, and the child's head was movable about the superior strait. The membranes were unruptured. By no justifiable degree of force could the head be made to enter the pelvis. The fetal heart-sounds were good. It was evidently, therefore, a choice of Cesarean section, craniotomy, or symphysiotomy. The last was done, with the assistance of Dr. R. C. Norris and the valuable advice of Dr. R. P. Harris, who kindly consented to be present. The child was delivered with forceps in one hour and four minutes from the time the operation was begun. I purposely took my time, for the os was only the size of a dollar, and was very rigid, so that a more rapid extraction would have seriously injured the cervix. Head measurements: B. T., 7½; B. P., 9; F. O., 12; M. O., 13½; circ., 34. Mother and child are well.

The technique of symphysiotomy is simple and easy. After thoroughly cleansing the field of operation and disinfecting the vagina as well, a short vertical incision is made on the abdominal wall, reaching to about three-quarters of an inch above the symphysis. The attachments of the recti muscles are severed just sufficiently to admit one finger. The forefinger of the left hand is passed under the symphysis, and upon this as a guide the curved knife of Galbiati is inserted until its beak projects under and in front of the symphysis. The joint is then cut upward and outward. To avoid injury to the urethra, a metal catheter is inserted and pressed by an assistant downward and a little to the right, while the knife is placed a little to the left; but with Galbiati's knife I should think that there is little likelihood of cutting the urethra or the plexus of veins in its neighborhood. I at first thought that an ordinary probe-pointed, curved bistoury would serve my purpose well enough, but I quickly laid it aside, and was glad to avail myself of Galbiati's knife, an illustration of which is appended, which I happened to possess—at the time one of the three, I believe, in the country.

As soon as the joint has been severed, the wound should be covered with iodoform gauze, and then the child extracted with forceps, or allowed to be delivered naturally, as seems best in the individual case. I should, I think, almost always prefer the forceps. It is well to have the trochanters supported by assistants during the passage of the child through the

*Centralbl. f. Gyn., 1892, No. 30.

†Annales de Gynécologie, September, 1892.

‡Millerheim: "Ueber die Symphysiotomie," Centralbl. f. Gyn., 1892, No. 30.

§Personal communication.

pelvis, so that the sacro-iliac joints shall not be injured.

As soon as the delivery is completed the wound is sewed up, the lowest stitch, if desired, passing through the top of the symphysis. How the whole symphysis can be stitched up, as Leopold claims to have done, I do not understand. After closing the wound and dressing it, rubber adhesive strips are placed around the hips and the lower abdomen, and a tight binder applied. The symphysis unites surprisingly soon, and three weeks after the operation the patient can walk as firmly and as well as ever.

There is only one disturbing thought in connection with the introduction in this country of an operation destined to do so much good. The charge of superficiality lies with some justice against us. We are too ready to reach out toward the top without a sufficient basis of solid preparation, and I fear that symphysiotomy may be undertaken by many who cannot correctly measure a pelvis and who have not the experience to decide whether a head can pass through the pelvis in which it is about to enter or in which. it is engaged. There is consolation, however, in the reflection that if symphysiotomy should be done needlessly the results are not likely to be so disastrous as in the case of Cesarean section, which, to my knowledge, was done several times unnecessarily during the excitement produced among medical men by the improved results of the Sänger operation.

SYPHILIS AND GENERAL PARALYSIS.

J. Bonnét, *Thése de Paris,* 1891, (Abstr. in *Schmidt's Jahrb.*) Out of the eighty-one paretics in the Villejnif asylum the author found fifty-four who had certainly had former syphilis, eleven who probably had had it, and six who possibly had. Ten cases were apparently non-sypniletic. He hence considers from 66.6 to 80.2 per cent. thus affected, and concludes that the more carefully we search for syphilis in paretics the more general we find it. Out of one hundred and four other insane patients there were ten certain, four probable, and three dubious cases of syphilis. Bonnet does not conclude that syphilis is the invariable antecedent of paresis, but calls it the most important cause. As adjunct causes he considers alcohol and heredity the most important.

FOREIGN BODIES IN THE CORNEA.*

By EDWARD JACKSON, M. D.,

PROFESSOR OF DISEASES OF THE EYE IN THE PHILADELPHIA POLYCLINIC; SURGEON TO WILLS EYE HOSPITAL.

The history given by the patient, as to a foreign body in the cornea, is often worthless. If the foreign body is but partly imbedded, and the projecting portion hard and angular, so that every movement of the lid causes a scratching of the conjunctiva lining it, the patient, of course, immediately notices its presence, and can give a correct and definite history of its occurrence. But if the foreign body be deeply imbedded so that it does not touch the conjunctiva of the lid, or if it lie with a perfectly smooth surface presenting to the lid, its entrance may not be noticed, or the momentary disturbance caused by it may be so slight as to be forgotten before the secondary effects of its presence draw attention to the eye, and even if those secondary effects are ascribed to it, and the foreign body itself perceived, it may be supposed to have entered the eye at a time considerably later than was the case. Often, however, the patient will, on account of the gradual advent of symptoms of irritation, ascribe them to an entirely different cause.

Again, very many patients come with the impression that a foreign body is in the eye, from the irritation—the sensation of scratching—caused by a simple conjunctivitis. And these, having thought the matter over carefully and repeatedly, can usually tell just when and how the mythical body lodged there. And they even go so far as to accurately locate it, by picking out some spot on the iris not before noticed, and regarding it as the offending object.

For the diagnosis of a foreign body in the cornea we must depend on, what generally is sufficient basis for a diagnosis in diseases of the eye, the results of our examination of the patient. If the foreign body is comparatively large the most casual glance may reveal its presence, but often there is need for special methods and a prolonged search before its presence or

*Read before the Philadelphia County Medical Society, October 12, 1892.

absence is established; and even where its presence is perfectly obvious at the first glance these same methods must often be employed to make sure that we have completed its removal.

In the search for the foreign body the important idea with reference to the illumination of the eye is that it shall be thoroughly under the control of the surgeon, so that he may either strongly illuminate the cornea itself and view it against a dark background of unilluminated iris and pupil, or can illuminate the background, leaving the cornea in comparative darkness, and depending on the interruption of the light from the background, which any opaque foreign body will cause, to reveal its location. This is the advantage that the so-called "oblique" or "focal" illumination in the dark room possesses over inspection by an ordinary diffused light.

The shifting of the point of view so as to bring the foreign body into the area of most favorable illumination is essential to any thorough search, whatever method is employed. By focal illumination foreign bodies of light color will be best seen when strongly illuminated against the black pupil as a background; while if the foreign body is dark it is better to strongly illuminate the iris behind it.

We may get an illuminated background against which a foreign body will usually appear as a black speck by throwing the light into the eye with the ophthalmoscope mirror held several inches in front of it, and shifting the position of the eye or the point from which it it viewed so as to obtain the fundus reflex through the different parts of the cornea.

An excellent model for searching for the foreign body, and one that has the advantage of being available during its removal, is to look for the interruption that it causes in the reflex obtained from the corneal surface. To do this, place the patient facing a window with a large open sky space, while the surgeon takes his position so as to obtain the reflection of the sky space from the surface of the cornea, a very good position being to stand behind the patient, looking down on the cornea. The patient's eye is then turned from point to point, so that the reflection is obtained from all parts of the cornea in succession. If the window with clear sky space is not obtainable, a piece of plain white paper or card-board strongly illuminated, and held close in front of the eye to be examined, will furnish the required reflex from the corneal surface. The essentials are that the reflex shall be bright, uniform, and large enough to enable the observer to go rapidly over the whole cornea without missing any part of it.

If on any part of surface there is an irregularity, as an ulcer or a foreign body, this will cause an interruption of the reflex, and be immediately noticeable. A great help in making such irregularities prominent is the careful drying of the cornea with a little absorbent cotton, a method to the full value of which my attention was called by our fellow member, Dr. M. W. Zimmerman. The removal of all moisture does not impair the reflex from the sound cornea, but lays bare any irregularity or loss of substance, which, when filled with fluid, would give almost the normal corneal reflex.

Another aid to the detection of foreign bodies in the cornea is the use of a solution af fluroescin. A good solution consists of

Fluroescin	1 grain.
Sodium carbonate	2 grains.
Distilled water	1 fluidrachm.

A single drop of this is placed on the suspected cornea, and after two or three minutes the excess is allowed to be washed away by the tears. It is then found that while on the uninjured cornea not the slightest effect has been produced, the corneal tissue in the neighborhood of any recent abrasion has been stained a noticeable light green. This discoloration at once directs attention to the locality of the injury, and the stained tissue furnishes a background against which any foreign body of dark color is more readily seen.

While the reception of a foreign body in the cornea may not be noticed, and during the first few hours the pain and redness resulting from its presence are apt to be quite slight, its continued presence provokes a reaction which increases in severity until it is gotten rid of. At first the redness will be confined to the vessels of the part of the peri-corneal zone nearest the foreign body, and its location will then often guide us to the site of lodgment. Later, it extends until the whole conjunctiva and the deeper tissues of the globe become hyperæmic, when it becomes of little diagnostic value. With the in-

creased vascularity comes increased pain and tenderness.

Self-cure, in the cases of a foreign body in the cornea, takes place by suppuration of the adjoining tissue to such an extent that the softening loosens the foreign body and allows it to be rubbed off by the movements of the lids—a slow, painful process, that probably few persons are solid enough to submit to without seeking competent aid for its removal. In a few cases, however, the inflammation subsides, the foreign body becoming surrounded with fibrous tissue that tolerates its presence, and in rare cases it is possible for a foreign body to remain in the cornea a long time without provoking any reaction. I have met with three cases in which foreign bodies were thus retained for periods varying from one to eighteen months.

Of the removal of foreign bodies from the cornea in general, little need be said. The introduction of cocaine as a local anæsthetic has enormously simplified it. There is, perhaps, some danger now of being led by the passive demeanor of the patient to indulge in unnecessary manipulation of the parts. The thorough cleansing of the actual cavity of lodgment, together with the scraping away of the bruised and lacerated tissue, is very important, but the promiscuous scraping of the neighboring surface in the attempt to catch a foreign body that is not clearly seen is always harmful if not dangerous.

When the foreign body enters with such force as almost to penetrate the cornea, and, to a still greater extent, when it projects into the anterior chamber, its removal becomes an operation of considerable delicacy and importance, on account of the danger of the premature escape of the aqueous humor and the scratching or puncture of the anterior capsule of the lens, causing traumatic cataract.

There applied a few month since, at the Wills Eye Hospital, a young man who had received a small chip of iron in the center of the left cornea the day before. Efforts had been made to extract it with a piece of magnetized steel, and with a penknife, but had been unsuccessful; whether they had driven the fragment deeper I do not know. He applied in the morning, and Dr. Pontius, the resident surgeon, finding that the aqueous was escaping and the anterior chamber shallow, had wisely, simply instilled atropine and closed the eye with a light bandage to secure rest. When the patient returned in the afternoon the swelling of the adjoining cornea had stopped the leakage of the aqueous, and the anterior chamber was of normal depth. The chip of iron was seen projecting from the posterior surface of the cornea into the anterior chamber.

The eye was placed under the full anæsthetic action of cocaine, and a broad, gradually tapering needle introduced at a little distance from the wound, in such a manner that its point entered the anterior chamber close to the foreign body and passed back of it. This point was held against the posterior surface of the cornea, the needle being steadily pressed forward sufficiently to keep the incision full and prevent the escape of aqueous. The foreign body was then dug out with another needle and the ordinary corneal spud. This was attended with the escape of some aqueous, but, with the broad needle held flat to shield it, any injury of the lens was prevented.

In such an operation the placing and steadily maintaining in proper position of the broad needle that acts as a shield is the most difficult part. For this purpose a needle which continues to broaden and becomes blunt and rounded on its edges, so that it ceases to act as a knife and more perfectly performs its function as a plug, might be a slightly better instrument than the ordinary broad needle. In this case the steady maintenance of the shield-needle in position was materially aided by causing the point to reënter the posterior surface of the cornea, and by introducing it in such a direction that the tendency of the patient to move the globe kept it pressed againstthe needle rather than withdrew it.

When a foreign body composed of or containing iron remains a few days in the cornea it is apt to leave a dark-brown ring of staining when it is removed. It is often difficult to decide whether the appearance is due to this stain alone or whether some portion of the foreign body also remains. On this account it is more satisfactory to remove the stain if this can readily be done, but any prolonged or extended scraping is not justified, for the stain is harmless and temporary.

The electro-magnet is of little use in removing foreign bodies from the cornea

because they are so firmly wedged that its force is entirely insufficient to dislodge them. There is, however, a special form of foreign body for which I have resorted to the electro-cautery, namely, grains of gunpowder, which have proven, when the attempt was made to extract them in the method of ordinary foreign bodies, to be so intimately associated with the adjoining corneal tissues as to render it impracticable to extract them in the ordinary way without too much laceration of tissue.

In the case of the patient shown this evening there were three such grains in the left cornea remaining after others were removed without difficulty from both corneas. These deeply imbedded and diffused grains were touched with a pointed electrode, and thus destroyed with the least possible damage to the surrounding tissues. The same method was applied to some of the grains that had been at the same time imbedded in the lids, brow, and cheeks, with the very satisfactory results shown.

VARICOCELE.

Mention of a new plan for the treatment of varicocele, prompts M. M. Latta to say for the last three years I have in three cases adopted the plan of passing an elastic ligature in front of the vas-deferens, but including veins and everything else, much as is done in the treatment of an anal-fistula. It is not intended to have the ligature cut its way out, and it is only left in until it is certain that the veins are occluded. Stout threads are fastened to each end of the elastic cord, and then by the aid of a large Hagedorn needle it is carried in and the ends drawn as tight as is thought desirable, and tied across with a strong thread. The patient must stand up until the ligature is passed. After that it makes no difference what position he assumes. The operation is practically bloodless and requires almost no time for its performance. There is generally some pain for an hour or two, and very little after that. The patient should lie in bed or on a lounge until the operation is completed, which will depend on how tight the ligature is drawn—in my own case it required from eight to ten days. No great length of time is lost, the operation is safe and the cure is permanent.—*Ind. Med. Jour.*

Society Reports.

ALLEGHENY COUNTY MEDICAL SOCIETY.

Scientific Meeting, September 20th, 1892.

J. Chris Lange, M. D., President, in the Chair,

DIAGNOSIS OF TUBAL PREGNANCY BEFORE RUPTURE.

Dr. J. E. Rigg: About April 7th, 1892, I was called to see Mrs. A., aged 34, with the following history: Married twelve years, never had a child, though she miscarried once about seven years ago at from six weeks to two months. At the time I saw her she was suffering severe pain in lower part of abdomen more or less constant. At the last period had not changed to any degree, but had been suffering more than usual with soreness and pain in pelvis.

I may state here that she had suffered a good deal of pain in that locality for years, for which she had frequently sought relief by treatment without success; at this time there was a bloody discharge with more or less shreds of tissue.

Bimanual examination revealed the uterus little if any enlarged, no tenderness, the right tube and broad ligament somewhat enlarged, but movable. I thought it possible that she was pregnant, but could not satisfy myself fully on that point. Leaving an anodyne and ordering perfect quietude, I left for the night. I saw her again daily for three days, when the nurse showed me a piece of animal tissue resembling very closely a part of a placenta, with the statement that the trouble was all over now. Not feeling quite satisfied I mopped out the uterine cavity with a strong etheral solution of iodine. At this time I did not make a bimanual examination. For several days (I think about ten) she was quite comfortable, got up and went about her work, the discharge almost disappearing. I did not see her again until May 13th, when she looked quite pale and exhausted. I ordered her back to bed. She complained that the old pain had returned, but not so severe, and that it would last about three hours in each twenty-four and then be quite easy for the rest of the day; this

would come on each day about four o'clock. I returned, three days later, having been away from town in the meantime, and found about the same general condition.

Not feeling clear as to her condition I made another bimanual examination; at this time I found the apparent thickening in the right tube had developed into quite a distinct tumor, oblong in shape, movable, attached at one end to the uterus, on which it could be moved as a hinge. When drawn away from the uterus it would drag it with it but it could be moved in any other way without affecting it. The shape of the tumor, the fact that it was not inflammatory and attached to the uterus the way it was, and that it had enlarged so rapidly, together with a history of possible pregnancy aud the discharge of what seemed to be placental tissue, which I was now convinced had been the decidua, pain at periods and pinched expression, left little doubt in my mind that I was dealing with a tubal pregnancy.

I informed her of the nature of the growth and asked that Dr. Buchanan see the case, and if he would concur, advised that she be operated on without delay. The following morning Dr Buchanan saw her with me, and concurred in my diagnosis. Accordingly, on the 21 inst., she was opened and the tube removed, it bursting in the delivery. The fœtus was not found, but the placenta was there, well marked. The case did not have any unfavorable symptoms in the process of recovery.

Dr. Buchanan: Dr. Rigg deserves credit for having made a positive diagnosis of extra-uterine pregnancy in this case prior to rupture, and I believe it is the only case reported in this vicinity where the diagnosis was made previous to rupture of the sac and confirmed by the operation. When I was called to see the case, I fully concurred in the diagnosis and a few days later operated. The tube was found to be distended to the size of a large lemon. It burst while being drawn through the incision. The operation was attended by no difficulty and the patient made an uninterrupted recovery. I here exhibit the specimen, ovary, dilated tube and placenta *in situ*.

Diagnosis of extra-uterine fœtation before ruptute is considered by many authorities impossible, but in this case it was positively made by Dr. Rigg before I was called.

Dr. Werder: I must congratulate Dr. Rigg on the correct diagnosis. I was present at the operation and examined the specimen. There was no fœtus in the tube after removal. The question would come up what became of the fœtus. There are two ways in which the fœtus could have disappeared. The first way is the death of the fœtus from some cause and absorption, and probably that is what happened in this case, that is tubal absorption. The fœtus may be expelled into the abdominal cavity and absorbed, and, according to some recent investigations in this matter, I believe this is rather a common occurence. Cases of the former kind terminate not by a sudden shock, as in case of rupture into the abdominal cavity; there is not that marked anæmia accompanying it, but at the same time there are severe pains and cramps. I had intended to demonstrate a specimen which I removed on the 16th of July, from a woman, who was practically moribund when operated on, but the specimen became spoiled and is hardly worth showing. It was a very beautiful specimen; the fœtus was intact and the placenta and tube were also in good condition. The first three or four days following the operation the patient was in very good shape; everything appeared to be promising; but on the third or fourth day diarrhœa commenced, which everything failed to control. She died on the eighth day, from exhaustion. This is the fifth case of extra-uterine pregnancy on which I have operated, and the only case I have lost.

ADVANTAGES OF SYME'S AMPUTATION.

Dr. J. W. Macfarlane: One of the resident physicians to the West Penn Hospital and myself each performed a Syme operation on the patient shown in these photographs. I believe there are few cases of double Syme amputation extant. In addition to the desire of showing you that case, the object in bringing it before you is this: In the report of the transactions of the State Society for 1891, Dr. Allis, in his Address on Surgery, condemns amputations that are done below the so-called point of election. He speaks of Pirogoff's and Chopart's but makes no mention whatever of

Syme's amputation, passes that without a word. Now in Western Pennsylvania at least, Syme's amputation is not only admissible but is considered an excellent amputation; then possibly next to this is Chopart's. Though the latter is often a nice operation and successful, it is not as popular with the profession as Syme's.

I have consulted an artificial limb manufacturer of this city, and he says there is no other stump as good as that furnished by a Syme amputation. The case that you have a photograph of is that of a young man from Beaver Falls, about twenty-one years of age, who was run over by a train. He had his feet on the rails and the wheels passed over them destroying the fore part of both feet. He was detained in the hospital longer than he would otherwise have been, for the simple reason that he had suppuration. It was no fault of ours, however. For the first twenty-four hours he threw himself around, removed the dressings, and finally poured milk over both stumps, and he was so intractable for awhile that we had to put him in a straight-jacket. With Dr. Murdoch's assistance, I did a Syme's amputation on a young man for gangrene of the foot. He refused, when he came in, to have anything done with the foot, and moist gangrene occurred. I saw that patient the other day and he was doing admirably, able to plant his heel firmly on the ground. This young man, before he left the hospital, was able to walk with the aid of two canes. Of course his gait is not artistic, but there is no other stump I know of which would enable him to go around in that way. Dr. Allis stated that it is impossible to walk except as a very old man. That was in eighteen hundred and ninety-one. In ninety-two the matter came up again before the State Society, and Dr. Price, of Philadelphia, who has, in his person, had amputation below the knee at the so-called point of election, went so far as to say that any one who would do an amputation of the foot, should be sued for mal-practice. Dr. Murdoch was present, and I think was able to take care of his side of the case in refuting the doctor. To show the gait of a patient with a Syme's operation, I have brought a case here to night, illustrating the fact that walking can be done right nicely. This patient is one operated on by Dr. Murdoch. I have here some limbs made in this city. This is the leg that is furnished for a Syme stump. You will see it is not so cumbersome as a leg in which you have amputation at the point of election. This is a leg such as would be furnished a man who had amputation at the point of election. There is a stump coming down here about five inches, and a man can walk well with such a limb. You can see quite readily that this is a much more heavy and cumbersome apparatus than the limb for the Syme. A man in such a limb as this can walk very nicely, but that is no reason why Syme's amputation should be under-rated.

I exhibit, also, a smaller limb for a child and one for an amputation through the condyles, and this also makes a very nice stump ; but my chief reason in showing these limbs was to show the difference in the weight of the Syme and the limb for a leg amputation, which is a matter of no small moment to one who has to travel on an artificial limb.

Dr. Buchanan : I cannot let the opportunity pass of raising my voice in protest against the position taken by Dr. Mordecai Price in this matter. I was perfectly astounded when I read of his advocacy of amputation through the leg in all cases where the tissues were destroyed back of the ball of the great toe. I believe such teaching is calculated to do the very greatest harm. When we see a stump such as this and the facility with which this man walks on it I cannot see how any one in his senses could sacrifice a limb up to the point of election.

Dr. Murdoch: This is a subject in which I have taken a great deal of interest, and one which I think is of great importance to everyone who practices surgery. It was the opinion of the older surgeons that when a foot was crushed back of the ball of the great toe, that the leg should be cut off at the point of election. That was the rule until James Syme advised the operation at the ankle-joint. Syme's amputation, the operation that you see has been performed on this young man. The first operation was performed on the ankle-joint in 1842, and after he did it, he said it should supersede amputation in the leg for all injuries to which it was applicable, injuries in the foot, and it has superseded amputation in the leg ever since, in the minds of all surgeons, in all countries, I believe, excepting the surgeons of Phila-

delphia, and I believe no voice has ever been raised against Syme's amputation until this opinion has been proclaimed by the surgeons in Philadelphia. ' Now, in 1887 I made an address before the State Medical Society when the meeting was held in Williamsport. I had the honor to deliver the address on surgery, and in that paper, which is published in the volume of transaction for that year, I went through the subject so fully I feel it would not be worth while for me to go into it again. It is a pretty large subject, but when any one, because he wears an artificial limb himself, claims thatSyme's amputation should be abandoned and all operations of the foot back of the ball of the great toe, I contend that he has said something which is absolutely absurd; and when he adds to that, that any man who makes amputation at that point should be prosecuted for malpractice, he says something that is foolish. We all know that the danger to life after amputation increases as we approach the trunk. On the point alone the foot amputation should be favored. I have in this city a colored man upon whom I did a double Chopart amputation. It is not an operation so universally approved as the operation of Syme, but I contended in the paper to which I have referred, that in certain cases where a good flap can be secured, the operation of Chopart, preserving the heel, is preferable to Syme's amputation. This colored man is a cook and walks with nothing on his foot, merely stuffing the forepart of the shoe with some rags. He puts on ordinary shoes and walks about his kitchen the same as I would, and he is able to walk a couple of miles with no other assistance than a cane. In some cases Chopart's operation is not a success, because the foot is drawn up. Syme's amputation is considered a very favorable one in Pittsburgh. I know of patients who walk better than this man and stamp on the heel and jump from a chair striking with the full weight on the end of the stump. Where the hard tissues are preserved, as in Syme's amputation, the face of the stump is so covered with the thick tissues of the heel that it perserves a better stump and is about the only one on which the patient can bear the weight of his body. I do not think anyone would think of amputating immediately above the ankle joint, as it is certainly better to go up to the calf. A professional man, such as Dr. Price, who does not do hard work and merely walks about the city, can carry a heavy limb such as this; but to a working man, its very weight is a great disadvantage, to say nothing of the cost of repair, which is as much in a year, according to Dr. Price, as the repairs of his buggy. I do not believe it is right for surgeons to be governed altogether by opinions of instrument makers. It is for the instrument makers to make artificial limbs, as you see it can be done, for those men who have suffered amputation at the joint. I think every right-minded man who will consider the subject, must conclude that amputation at the ankle joint is preferable to one in the middle of the leg.

Dr. Daly: I want to take issue with Dr. Buchanan on one statement, that is, that the statement attributed to Dr. Price is calculated to do harm. I do not believe that any one who would make such a statement would do harm to anybody but himself. I do not believe that members of the profession, the younger members especially, would pay any attention to the opinion of Dr. Price. I believe it has been demonstrated in other places than here it is an excellent amputation. I have seen five or six in various hospitals, but I have yet to see a Syme's amputation that is not very good and useful in its results to the patient.

Dr. R. H. Grube opened the discussion of the paper announced for the evening, entitled "The Pathology of Old Age." (see page 648).

Dr. Koenig: Dr. Grube has said if I understood him correctly, that the condition in old age is one of atrophy. That undoubtedly is correct, but it seems to me there is something behind that which is responsible for the final condition. All vital phenomena in the human, as well as in all other living organisms, may be referred to certain attributes possessed by protoplasm, and instead of atrophy it would seem more definite to refer the condition characteristic of old age to diminished protoplastic irritability. There are apparently in the human life, about three periods of vital activity. During the first period constructive metabolism is very strong, and exists in the normal life for about twenty-five or thirty years, during the period of growth, the period of childhood and adolescence. Then during a

period of perhaps twenty years more or less, there is an equilibrium between the destructive and constructive metabolism. The forces are just about able to hold each other level; the wear is repaired every day by the constructive action. Then gradually after that the tissues are not fully repaired and the protoplasm itself doubtless gradually undergoes a retrograde action and irritability and other attributes decrease, so when we have pneumonia in the aged the protoplasm in the cells of the brain does not respond to the influence that is sent there from the injured lungs in which the pathological condition is very different from that observed in the case of young persons where the reparative processes are active, nor do we have the symptoms that exist during the early part of life.

In the third stage the organism gradually breaks down more and more and the repair is less and less until finally in very old age the condition characteristic of the new born is almost reproduced, with all the functions of the protoplasm arrested, resulting in a physiological death. I remember one case of this kind in an old man up in the nineties who gradually lost his special senses, both blind and deaf, recognizing his friends by the sense of touch alone. Before he died the nutritive process became so impaired that gangrene of his toes set in. In this condition he lingered for a few days till, in my opinion, the unexcreted product of tissue change, so poisoned his enfeebled nerve centres that death became a natural result.

Dr. Murdoch: I think the word degeneration is much more appropriate as expressing the changes in the tissues from old age than the word atrophy. It is a wise saying that "a man is no younger than his blood vessels," and it would be wise to say that a man is no older than his blood vessels and nerves. There are a few expressions used in medicine that are calculated to make us all very weary, such as bowel trouble, lung trouble, etc. I have no doubt these things are very troublesome to patients, but it seems to me that the terms, like many others in use, are very much misapplied. There is another term to which I object and that is heart failure. I do not think anybody can make a success of dying without heart failure. It is altogether too vague and meaningless, but I must confess myself to its occasional use.

Dr. Daly: In the female I have noticed a certain indication of approaching age and one that she cannot conceal very well. I refer to the appearance about the mouth and under the jaw. The tissues become flabby, the mouth can no longer assume the air of pouting lips; and these are the points that women who depend so much upon their personal appearance to make them attractive, such as actresses, desire most of all to overcome. I have been consulted more than once by actresses of world-wide fame. They had watched the on-coming appearance of senility, and while the skin covering their body was plump, the submaxillary tissue, which is flabby, hangs down. They would give anything to have that made plump again. Now, with the man, I do not know how you can judge as to his years. I do not think gray hair an indication of old age. Some day I expect to be old myself, and I have been watching for the appearance of old age in other men.

Dr. Lange: I would like to have a few remarks only on some terms which have come in the discussion this evening, which I have always been unable to understand. The words vital-affinity, vital-irritability and vital-susceptibility which were used this evening and frequently appear in books are used to designate what occurs before degeneration and atrophy. Now, it seems to me, gentlemen, that these are terms to which we, as physicians, and even as pathologists, ought to object. We do not know what vitality is. Vitality is a mystery and must remain so to us. Vital-susceptibility and vital-irritability and vital-affinity! I do not believe that there is one gentleman here who understands what those terms mean. I am sure I do not, and I have tried hard to find out. As physicians, these terms should be ignored by us. We can go no further back than to say that atrophy and degeneration are for the most part characteristic diseases of old age, and, therefore, the lesions upon which we can put our fingers and prove, but we can prove nothing beyond these lesions. Now, it is a matter of course that when we have degeneration of a tissue that there is something back of this, but in some cases we cannot say, and as I believe that nobody knows what is back of this lesion which is demonstrated, I think it is as far as we can be expected to go to name the lesion.

In regard to pneumonia, I agree with what has been said, that pneumonia in old age travels very insidiously. However, as the term pneumonia without qualification always gets into the discusosin, there remains the unfortunate fact that pneumonia appears in so many forms, from a bronchitis to a passive pneumonia and all the intermediate stages and degrees, that when pneumonia is mentioned unqualified it is hardly possible to know of what one is speaking. Post-mortem examinations even often fail to decide whether it was bronchitis or pneumonia, so intimately connected are these two.

DR. KOENIG: I want to say in response to the last speaker that protoplasmic irritability is no myth but an established fact. It is our duty to go beyond superficial symptoms in our investigations of subjects of this character, not only is this duty imperative on pathologists but likewise on the general practitioner of medicine.

DR. DALY: Degeneration is not necessarily followed by atrophy as witness the case of senile enlargement of the prostate gland. Other cases might be cited.

DR. GRUBE: I accept Dr. Daly's suggestion that degeneration would have been the better word to use where I used the word atrophy. At the same time I agree with Dr. Lange's statement that atrophy usually goes with degeneration. As for Dr. Murdoch's remarks on heart failure, I cannot agree with him that it is a fad. We use that term now as we formerly used the term paralytic stroke, indicating now the result of cerebral hæmorrhage. Heart failure where the person drops dead, nine cases out of ten, is simply a heart failure. The heart is dilated and from some start or strain distends the right ventricle and the heart stops. I do not know of any better term and I think nine times out of ten it is the cause of sudden deaths.

GASTRO-ENTEROSTOMY.

DR. WERDER: This specimen is from a case that was operated on by me last November and we obtained the organs after her death six and one-half months later. Nothing would remain in the stomach for three months before operation. To remedy this gastro-enterostomy was performed and all the food passed through this artificial opening connecting the stomach with the small intestine. The six and one-half months she lived after the operation, she lived in perfect comfort and suffered no pain whatever. She lost about one pint of blood shortly before her death, and I think that was the immediate cause of the fatal issue. Three days before she died she walked about one mile. She suffered intense pain before operation, and she was in bed three months before she was operated on.

DR. BUCHANAN: I had the pleasure of assisting Dr. Werder in this operation and I must say that the patient was in such a low condition that it was very questionable, when the operation was begun, whether it could be completed. After the condition within was discovered it was questionable whether it was justifiable to enter on the gastro-enterostomy, but the operation was completed in a very short time. I saw her afterwards and she was apparently in a perfectly normal condition. I think this is the first operation of the kind that has ever been performed in this part of the state.

EXPLORATORY LAPAROTOMY.

I would mention in this connection a case that I operated on shortly after this. An old man had a very large cancer of the stomach but had no vomiting. The diagnosis of the case was that of omental growth, and he was operated on because he was losing flesh and because of the rapid increase of the growth of the tumor. When the abdomen was opened the condition was discovered as being that of a large cancerous growth in the stomach, and the patient was in such a low condition that, although I was prepared to perform gastro-enterostomy, I did not consider it advisable to do so, because he had no symptoms of obstruction and because I did not think he would be taken off the table alive. This man simply had an exploratory incision, and recovered from the operation but died on the thirteenth day of obstruction due to the fixation of the growth by adhesion to the incision, which prevented the free movement of the stomach. This occurred after he began to take solid food. I do not think that I have ever heard of this accident happening after an exploratory operation in cancer of the stomach.

THE MEDICO-CHIRURGICAL SOCIETY, OF LOUISVILLE.

Stated Meeting, September 16th, 1892.

The President, Dr. F. C. Simpson, in the Chair.

Dr. S. G. Dabney read a paper on "Myxoma of the Nose and Fibro-Myxoma of the Naso-Pharynx." (See page 645).

DISCUSSION.

Dr. Wm. Cheatham: I believe the Doctor forgot to mention the effect of nasal polyps upon the antral and other sinuses; their presence may be cause or effect, in affections of the sinuses; by stopping communication between the nasal cavity and these sinuses, thus preventing the interchange of gases, an inflamation of the sinuses may result; or again they may be the result of sinus inflammation and by their presence, may prevent a cure. The Doctor's paper is a good resumè of the subject to date.

Dr. J. M. Ray: Dr. Dabney has given us a very good resumè of polyps and their formation. It has been my experience to see polyps quite frequently in children. I remember that McKenzie especially calls attention to the fact that these growths are not apt to occur in children. In the last two or three years I have had several cases under twelve years of age. The last experience I had with growth of this character was in a child under fourteen.

As to the form of growths that project into the naso-pharynx; I believe that primarily they are the same thing as an ordinary polyp, growing backward into the naso-pharynx, developing rapidly and taking on a fibrous condition. I have removed several of them. I presented one to this society some time since, which was a very large cyst quite as large as a guinea egg; it filled up the entire post-nasal space. I have often seen these growths project out into the throat having undergone fibrous degeneration, being hard and dry. I believe they are simply misdirected nasal polyps developing to a greater size, and in that way becoming the so-called myxo-fibroma of the naso-pharynx.

Dr. Chilton: (of Dallas, Texas) I have enjoyed Dr. Dabney's paper very much. The remarks in regard to bone degeneration in some cases of myxomata, cause me to recall a case I had several years ago: When I saw the patient he had not been breathing through his nose for twelve years. I examined him time and again, and there was absolutely no bone trouble whatever. I removed, I think, eight or ten polyps, and the man recovered under treatment very nicely and that has been six or eight years ago. It has been my experience to find no bone trouble in these cases. I have been paying especial attention to cases of this character for some time, and have never seen any bone degeneration.

As to the benefits of after treatment, I have found that in nearly all cases there is a recurrence of the polyp without after treatment. In fact, you always find some pathological condition which is unquestionably the cause of these polyps, and the liability to recurrence is very great.

Dr. W. L. Rodman: I would like to ask Dr. Dabney how common sarcomatous polyp is in the post-nasal space; that is how often he has seen them.

Dr. S. G. Dabney: I only remember having seen one case of sarcoma in the nasal passages. But it is a well known fact that the tendency of fibroma is to undergo degeneration, becoming sarcomatous in character.

Dr. J. M. Ray: I want to ask what proportion of cases of multiple nasal polyp are permanently cured by operation, or any after treatment. In my experience where the polypi are multiple, they will recur in spite of any treatment, before or after removal.

Dr. S. G. Dabney: Referring to Dr. Cheatham's remarks: There is no question but the condition he mentions does sometimes occur, but I have never encountered it in my experience. I believe Bosworth reports having seen several cases of that kind.

Notwithstanding the fact that McKenzie says nasal polyps are very rare in children, my experience has been very much like that of Dr. Ray in this respect. I have seen three or four cases in children under twelve or fourteen years of age.

In regard to the point made by Dr. Chilton about bone disease: My observation is that the bone is very often diseased in cases of multiple and long-standing nasal polyp, but not otherwise. I do not think, however, that the occasion for removing the bone is because of necrosis, but the removal of a small portion of bone is

often necessary to reach the base of the polyp.

It is hard to say just what proportion of the cases are permanently cured. Dr. Ray's question is a very pertinent one, and is very hard to answer, as patients are often lost sight of by the attending surgeon.

(Drs. Ray and Cheatham state never having seen a case of multiple polyp permanently cured).

Dr. T. C. Evans: In regard to the recurrence of nasal polyps: There are some cases that I have had under observation ever since I have been doing special work (four or five years) in which they have not returned. The cases I have under observation, however, were single polyps. I do not believe these are as apt to recur as in cases where there are several. I remember one case particularly which I operated upon three years ago, where both nasal cavities were filled with polyps hanging down in the post-nasal space; they were all removed and up to six months ago there had been no recurrence.

PATHOLOGICAL SPECIMENS

Dr. A. M. Cartledge: No. 1. This specimen is only interesting from the rapidity of it growth. It was removed from a young man twenty-four years of age, two weeks ago last Monday. The history of the case is about as follows: Two years ago he commenced having pain in the left leg, deep seated pain but no swelling. This continued until several months ago, then there was some swelling. His physician who treated him in the country consulted a surgeon at that time, and there seemed to be nothing more than just a simple enlargement of the vessels with slight swelling. An incision was made down through the periosteum, and the trouble at that time was thought to have been, I believe, a diseased condition of the bone, together with necrosis and periostitis. After this incision the tumor took on a very rapid growth, and within three weeks attained the size which you see here. It is decidedly malignant requiring no microscopical section to prove that; one has been made, however, proving that it is sarcoma. I made a careful examination and advised immediate amputation at the thigh, which was done as stated two weeks ago. The patient left the infirmary in fourteen days from the time of amputation; there never was any suppuration, and he went home yesterday.

No. 2.—The next two specimens I want to exhibit are especially instructive, showing two forms of ovarian disease. One being a very large hydrosalpinx removed from one side, and a pyosalpinx removed from the other. There was acute ovaritis on the right side, with a small abscess on the left. Tube on the right side was fully as large as a sausage; adhesions were very dense; operation done about eight weeks ago. I report it not so much for the specimens as the subsequent course of the case. There was considerable hæmorrhage, and, owing to this and on account of the large amount of peritoneal surface exposed, I treated it as I have treated several cases very successfully, by packing in a large quantity of gauze in strips, not only for the purpose of drainage, but for the purpose of hæmostasis. In six hours from the time of operation the patient's temperature was 102½° F.; in twelve hours temperature had gone up to 103° F.; pulse very rapid; pain severe. She died in eighteen hours after the operation with this high temperature. On holding a post-mortem of the case it was found that the alarming symptoms were due to intestinal obstruction, although there had been very little tendency to vomiting, but there was rapid sinking and a little loop of the bowel had become incarcerated in the gauze that was packed in. I do not think the value of gauze packing in cases of this kind, where you have extensive adhesions and a great deal of blood, should be underestimated; I am satisfied it has saved cases for me in a good many instances; I have packed in great quantities of it in bad cases without causing any trouble. I shall continue to rely upon it in these cases, yet, in this case, it was the cause of death.

No. 3.—The patient from whom this specimen was removed was referred to me last Saturday by Dr. Scott; case referred to him by a physician in a distant city. Diagnosis had been made of pyosalpinx of the left side, and patient was sent here for operation. The woman to look at her seemed to be in fair health, color and expression good, she was a small woman and not much emaciated. On examination by the bi-manual method I determined that the woman was suffering from pyosalpinx, but was not inclined to think the disease was very extensive. The his-

tory was that she had a child about five years ago, and that three years ago she had a miscarriage with retained placenta; her physician, after the placenta had been retained for several days, performed an operation. After this she developed high fever and was in bed three or four months. Since that time she has only been able to be up a little while at a time without becoming exhausted; has been in bed the greater portion of the time. Diagnosis of pyosalpinx was then made by her physician, and she was sent here for operation. When she arrived temperature was about normal. Last Saturday I did the operation, and found the most extensive pyosalpinx that I have ever encountered; there was a great deal of pus; the adhesions were very strong and dense. I never saw anything to equal it. The left ovary and tube had to be separated from behind the uterus, and a great deal of pus escaped into the pelvic cavity. The right ovary and tube were very much enlarged and enlongated; there was also an abscess on that side containing about a half pint of pus. The cavity was thoroughly irrigated, glass drainage tube being used. The discharge from drainage tube was clear serum by Monday and was removed Monday afternoon. The patient was quite weak, pulse going up to 130. She has done uninterruptedly well, however, since the operation, has no pain. Sutures were removed to-day, abdomen perfectly flat, and there has been no further rise in temperature.

No. 4.—The next case I think is of especial interest. Patient a woman thirty-five years of age, and gives about the following history: Five or six years ago she had an attack of severe pain coming on suddenly about the stomach—referable particularly to the stomach and somewhat to the right side. Her husband who is a physician thought it an attack of bilious colic. He called a consultant, who differed with him, however. He searched the evacuations for two or three days after this, but was not rewarded by finding any evidences of biliary calculi. The woman grew better, the pain entirely passing off. From this time up to the present she has been having these attacks of intense pain, lasting anywhere from three or four hours to a day or a day and a half, and during these intervals several times her husband examined the stools but was never able to find any gall stones. The patient had been examined by several physicians, and diagnoses made of gastric colic, gastritis, etc.; there never was any jaundice whatever. One week ago last Wednesday she had a very severe attack, and her husband found it necessary to give chloroform to control the pain, also large doses of opium; this continued all day Thursday and Friday. Dr. Scott saw the case in consultation on Saturday afternoon, and upon examination discovered an enlargement in the region of the gall bladder about the size of a fist, and thought the trouble was in the gall bladder. I saw the case in consultation with him on Saturday night, made a very careful examination, found abdomen very tender, pain still intense, patient taking dangerous doses of morphine. I perfectly agreed with Dr. Scott with reference to the location of the trouble, and we decided to operate Monday. On Monday in the forenoon we did the operation of cholecystotomy, making an incision two and one-half inches in length over the liver, going through the peritoneum; on opening the peritoneum it was found that the gall bladder was covered throughout its anterior surface with a thin margin of liver; this was raised up—while it was movable to a certain extent, there were some adhesions on the lower surface. The gall bladder, on account of its great distension, had to be aspirated and we drew off about two ounces of greenish looking mucus, which seemed to be mixed with pus. I then made an incision into the gall bladder and searched for stones. Seven large stones were removed, one being embedded deep in the cystic duct, which was removed with some difficulty. From the time of the operation the woman did well, had no further pain excepting for an hour or two, temperature never rose above 99° F. She is now up and the fistula gives evidence of rapid closing. On the second day after the operation I gave the patient an enema, and a mucus cast fully thirty inches in length and as large as your finger came away with the evacuation.

Dr. W. L. Rodman: The first specimen shown by Dr. Cartledge I take it is undoubtedly sarcoma, probably of the round cell variety. I do not think that anything has particularly been added to the history of sarcoma of the long bones, since the paper written by Dr. S. W. Gross, in 1880;

he made it clear at that time, that sarcoma of the long bones was most liable to occur in persons from twenty-four to twenty-eight years of age. They run a very rapid course as a general thing. I think Dr. Cartledge gave this man the only chance of his life: that is, going above the growth and removing by amputation.

Dr. Cornelius Skinner: In regard to the second and third cases reported by Dr. Cartledge and his treatment for the hæmorrhage after removal of the specimens exhibited, after breaking up the adhesions, etc., I have employed the gauze-packing in a number of cases and have never had any trouble such as he mentions, neither have I ever seen anything of the kind reported before. I would like to ask if he put this gauze loosely in the cavity, or packed it in solidly. The bowel will sometimes slip down in packing this gauze, and you can see how the gauze could be lapped over the bowel without being observed, and that more gauze put down over the top of that would constrict the bowel, the bowel slipping in between the packing. This packing should be done with a great deal of care, and our attention having been called to the accident, will, of course, make us still more careful in these cases.

This also opens another question—the treatment for abortion. One of the cases I believe had aborted, and in which the operator had attempted to remove the placenta after a certain delay. I think the result proves that these cases should be let alone; that no instruments should be used, and that the uterus should be left to expel the placenta in the natural way.

In the treatment of ovaritis and salpingitis—the cases reported leave us about as much in the dark as before. The ques- that is attracting attention just now is when should we operate, whether in the primary attack, or wait until the second or third attack, or until pus forms. About a year ago I had a lady under treatment for an attack of salpingitis; thought at the time there was pyosalpinx and so expressed myself, recommending an operation for removal of the tube, (which however, was not performed,) and saying that the woman would never give birth to any more children—she was already mother of two. Dr. Huitt saw the case with me and agreed that there was pus in the tube as it felt quite large; also agreed with me as to the prognosis concerning child bearing. Last Saturday, after all of this prognosis, I delivered this woman of a healthy boy baby. However she carried this child with a great deal of discomfort all through the nine months. She did not have one day of comfort in all the time, was not able to go out of the house. There was nothing of this kind in the two previous pregnancies. I never could find out just what it was that excited this inflammation.

Translations.*

By M. B. WERNER, M. D.

M. G. Houzel (*Le Bull. Med.* Sept. 21, 1892) contributes the following: In cases where uterine cancer is confined to that organ alone vaginal hysterectomy is indicated; if however the disease has invaded the neighboring organs to such an extent as to make total extirpation impossible, palliative surgical treatment should be tried. In order to control the hæmorrhage, pain, and sepsis from auto-infection—he uses for his operations a bistoury, curette, and scissors, and discards all caustics, except the occasional use of the red hot iron. He removes all degenerated tissue as far as possible in and around the uterus, at the risk of entering the peritoneum, bladder, or rectum, always in that case uniting as far as possible the edges of those cavities with sutures, and claims primary union. If however this is impossible he packs with antiseptics—preferably lactic acid solution.

His observations have proved that if cancer is left to nature its course is usually as follows: From twenty-five to thirty-five years, death between eight and fifteen months; thirty-five to forty-five years, death between ten and twenty-four months; fifty to sixty years and later, death between twenty-five and thirty-six months.

Those cases treated palliatively by Houzel resulted as follows.

Twenty-five to thirty-five years operated after eight months' duration, survived thirteen months giving a total of twenty-one months.

Thirty-five to forty-five years, operation

* Translated for Medical and Surgical Reporter.

after ten months' duration, survived twenty months giving a total of thirty months.

Fifty to sixty years, operation after twenty-two months' duration, survived twenty-two months giving a total of forty-four months.

These results led him to conclude that when cancer had developed so far that total vaginal extirpation ceases to be justifiable, the life of the patient can be prolonged and made more comfortable by the palliative operative treatment.

Salipyrin is credited with producing good results in profuse and painful menstruation, exception being made in those cases of grave inflammatory changes. It is usually given at the beginning of the period, and its results are more satisfactory than any of the Secale preparations regarding the loss of blood and duration of the period.

℞ Salipyrini.... ....1.
D. dos. No. 12.
D. in capsule amylæ.
M. S. D. One powder thrice daily.
—Dr. Zurhelle Burtscheid Aachen.

—*Deutsch Med. Zeit.*, No. 69, 1892.

Intestinal occlusion from a collection of ascarides, Dr. Paul Simon-Nancy, *Rev. Med. de l' Est.*, 1892.—Child æt. 11, lost consciousness owing to pain located below the umbilicus; there was vomiting and constipation; three days later temp. 38° A. M. and 39° P. M.; face pale, tongue slightly coated, abdomen somewhat distended; a localized swelling can be felt immediately below the umbilicus, which is painful upon pressure; on the fourth day an enema was followed by a slight movement, accompanied by bilious vomiting, which lasted during the night. Sixth day, abdomen more tender to touch, bilious vomiting still continues, have been several movements of pure blood, pulse 128, temp. 38°. Seventh day, child retains nothing; is constantly groaning; facies hyppocratica. During the night, several intestinal hæmorrhages; rectal examination reveals nothing abnormal.

An artificial anus was formed by Heidenreich, a large quantity of liquid fecal matter was discharged, followed by an immediate collapse of the distended abdomen; the day following seven living ascarides were discharged in a mass, and a little later an eighth. The second day after the operation there were five movements through the physiological opening. Santonin was given resulting in a discharge of three more worms, it was then remembered by the attendants that previous to the child's illness one worm had been discharged by the rectum and several had been seen in the vomited matter the day previous to the operation. The artificial anus was closed and healed promptly. Simon cites five other cases extracted from literature. Among these six cases, four have occurred among children. Simon was the first to operate and the only one who saved the case. Clinically the symptoms are those of invagination.—*Deutsch. Med. Zeit.* No. 76, 1892.

Dr. Langermann (*Deutsch Med. Zeit.* No. 75, 1892) reports a case of ligation and resection of the femoral vein, beneath Poupart's ligament, just above its conjunction with its longer branches. Recovery. Operator was Dr. Biedert—Patient, æt. 55, had been operated five months previously for carcinoma of the labia majora, at the same time an enlarged gland had been removed from the left inguinal region. Two glands enlarged to the size of a hen's egg appearing again in this place necessitating the second operation, one of these was deeply adherent, was intimately connected with the saphenous and femoral veins, making it necessary to resect the femoral vein 2½ cm. The wound was drained and closed, the limb elevated. Some swelling and depression of surface temperature existed the first evening which disappeared permanently the next day. The patient was discharged cured one month after the operation. She died later from a metastasis in the lungs. microscopic examination of the resected portion of the vein showed carcinomatous degeneration in its walls, and contraction of its lumen. The satisfactory recovery in spite of the artery remaining untouched Langemann explains by the fact that previous pressure on the vein by the growth, favored collateral circulation, thus avoiding continuous œdema and possible gangrene.

M. Doyen—(*Le. Bull. Med.*, Sept. 21, 1892) presents the results of 305 operations on the uterus and its adnexa. Of these there were 175 laparotomies, 122 vaginal operations, eight laparotomies, intraperitoneal:—Fifty-six cases tumors of the ovary, 1 death (75 years, broncho-

pneumonia); 13 cancerous degeneration of peritoneum with ascites, 5 deaths; 60 disease of the adnexa, 6 deaths—2 due to septic catgut; 30 extraperitoneal hysterectomies, 3 deaths; 1 hysterectomy, reduction of the pedicle, 1 death; 10 hysterectomies, total extirpation, abdominal, 1 death; 5 suppurating fibroids, uncompleted, 5 deaths; 10 vaginal hysterectomies for cancer, 4 uncompleted, 6 deaths; 22 operations for intrauterine growths (polypi)—incision and removal by piecemeal, 1 death; 8 finally requiring section.

The present status of surgery of the gall-bladder as viewed by Prof. Czerny. (*Deutsch. Med. Wochen.*, 1891): I. Operation for gall stones is indicated as soon as there are repeated or continuous attacks of colic. II. Empyema of the gall-bladder, if repeated troublesome symptoms present themselves, calls for operation. III. The typical operation for stone in the bladder consists of an incision, evacuation of the cyst and suture. The abdominal wound should be drained for a short time. IV. Should the ductus cysticus be impermeable, the gall-bladder inflamed, its contents markedly changed, a temporary biliary fistula should be established. V. Extirpation of the gall-bladder is only called for in grave forms of inflammation or carcinomatous degeneration. VI. In closure of the ductus choledochus an operation is absolutely indicated, provided the strength of the patient permits it, should it be impossible to remove the obstruction (stone or abnormal bend in canal) and the establishment of a fistula between the gall-bladder and duodenum is indicated. VII. The triangular (hackenförmiger) incision is in the linea alba, the horizontal immediately beneath the umbilicus, direction toward the right. VIII. The mortality of these operations is lower than that for stone in the bladder.

Careless obstetrics ending in death, (*Zeitschr. f. Medizinal beamte*). Dr. Rump of Osnabruck was called to a case of transverse presentation; he performed version and apparently extracted with ease a partially asphyxiated child. The midwife at once made efforts to restore the child in an adjoining room. On returning she found the doctor apparently engaged in removing the placenta. The mass he drew out seemed to her more like a piece of intestines, but which the doctor insisted to be a portion of the membranes, and ordered the midwife to cut them. The midwife kept the severed portions and found after careful cleansing and inspection that it was a portion of the intestines. The patient began to suffer pains and died soon after. The doctor had left her after writing a prescription. A subsequent post-mortem examination revealed a vaginal tear of 10 cm. through which 17 cm. of intestine protruded. The ascending and transverse portions of the colon were missing the edges showing a clean cut; the piece kept by the midwife supplied the missing portion.

Under legal examination the physician declared that failing in his efforts to replace the prolapsed intestines, which had become cold, he feared gangrene and thought it best to cut the prolapsed portion, and unite the edges with sutures, the condition of the patient, however, became alarming, he concluded to let matters remain as they were. In his opinion the patient died of shock induced by the pains and excitement of labor. The physician was sentenced to six months' imprisonment for careless practice resulting in death.—*Deutsch. Med. Zeit.*, No. 74, 1892.

Dr. Messner (*Archiv. für Patholog., Anat. und Physiol.*, 1892) gives a most interesting case of apparent hermaphroditism. Patient is thirty-one years old and has been married as a husband for seven years. The general form of the body is that of a female but the visible genitalia are those of a male. He shows sexual passions toward the female sex, but not toward the male sex. His first copulation was with a girl, when he was nineteen years old. As husband, he now performs his sexual functions and his wife has given birth to one child. He has emisio seminis, but Dr. Messner was unable at the time of a microscopical examination, to discover any spermatozoa. For the past ten years he has also shown regular menstrual periods every twenty-eight days. On one side he has a well developed testicle; on the other side his sexual gland is not so large.

It is to be hoped that the surgeons will keep track of this monstrosity, and when he dies, will furnish us with the exact anatomical details which could not be satisfactorily given from examination during life.

Abstracts.

THE CÆSARIAN SECTION IN PLACENTA PRÆVIA.

Dr. W. H. Ford (*American Gyne cological Journal*) says: The dangers of placenta prævia, as well to the mother as to the child, are due to thedevelopment of the placenta upon the lower segment, *and* to the *canalization* of this segment during labor.

While the first of these conditions cannot be avoided, the second should not be permitted in placenta prævia totalis, or partialis. Delivery should be by Cæsarian section.

In placenta prævia marginalis, if the circumstances were favorable, the os easily dilatable, the condition of the mother and child good, the head presenting or capable of being readily brought to engage, and the hæmorrhage arrested or moderate, it would be well to follow the method of intra-uterine and vaginal tamponade, and deliver by forceps if the child should be in danger. But if the os were rigid, the hæmorrhage profuse, the presentation lateral, the cord prolapsed and not reducible, or the *fœtus evidently suffering*, I would have immediate recourse to the Cæsarean section.

The Cæsarean section should be performed as soon as the diagnosis is established and the condition of the mother permits, to the exclusion of all other methods, as an elective and primary operation, in all cases of *placenta-previa-totalis* and *partialis*, and in placenta prævia-*marginalis* as soon as the conditions warranting it have been satisfactorily determined.

In the two graver forms of placenta-prævia the Cæsarian section should be practiced as a prophylactic measure, in place of any attempt to deliver by the natural passages, after the first hæmorrhage.

In cases where hæmorrhage is late or sets in only as labor begins, and where, consequently, the placenta is most probably attached laterally, it is advisable, until this entire subject has been practically studied, to deliver per vaginam, as a rule. If, therefore, the cervix be easily dilatable, and the hæmorrhage moderate, we may proceed as suggested in the more hopeful cases of marginal implantation. But *even here*, an undilated os associated with severe hæmorrhages would constitute a very serious condition. If the rigidity were due to fibrosis, it should be abated by multiple incisions; if to carcinoma, the radial Cæsarian section would be indicated. If the cord were prolapsed and after reposition still descended, the os being partly dilated and not dilatable, dangerous hæmorrhage continuing meanwhile, the Cæsarian section would be unquestionably indicated for the safety of both mother and child.

TREATMENT OF PNEUMONIA.

Dr. Jos. D. Craig, (*Albany Medical Annals*, for October, '92) in a discussion on the treatment of pneumonia, concludes that while it is a self-limited disease, it is unsound practice to permit a case to run its allotted course, without such medical means as will give relief. He sums up the indications for treatment as:

1. Prophylactic.
2. Hygienic.
3. Systemic, as regards,

(*a*) The period of invasion with chill and rise of temperature, and the danger from heart and lungs.

(*b*) The fever and its consequences.

(*c*) The cerebral symptoms.

(*d*) The period of crisis.

(*e*) The dyspnœa.

(*f*) The cough and consolidated portion of lung.

(*g*) The exhaustion and weakness.

Dr. J. H. Mitchell, in same discussion says: That each case requires treatment according to its own individuality. He recommends, bleeding, antimony opium, and alcohol. It is no one remedy, but the proper combinations that give best results.

Dr. Wm. Hunt recommends a dressing of a thin layer of cotton, applied over the affected side, secured with collodion, then add layer by layer, until a good padding is secured Thus, the fatigue and discomfort, of frequent poulticing is avoided.

Dr. A. J. Van Vranken in same discussion is a strong advocate of the use of large quantities of alcohol, even going so far as to say that if he were to be confined entirely to the use of any single drug, he would invariably choose alcohol. The amount to be given, in every case depends on its severity. While it is of use in the

first stage, its greatest virtue exists in the second stages. Its use must be pushed until the patient is convalescent.

Dr. Lorenzo Hale says that when a diagnosis is made, we should bear in mind that we are dealing with an infectious constitutional disease, which runs a typical course. Death, in this disease, is always due to insufficiency of the heart which demands first attention. We should employ early and cautious treatment, to prevent collapse; for this condition he recommends venesection; most alarming symptoms, will quickly yield to general bleeding, then clinch the advantage gained by the use of stimulants, which he claims, are always in demand, when the first sound of the heart is feeble, the pulse slow and compressible and the respirations becoming more rapid. If for any reason, alcohol cannot be used, such stimulants as ammonia, camphor, opium in small doses, strychnine and nitroglycerine, can be used.

He regards digitalis, as the great cardiac stimulant and restorative but in extreme danger, we should not wait for its action, but resort to quicker remedies, as the nitrites, ammonia, hypodermics of ether, brandy or strychnia.

For the fever, he believes in letting it alone, unless it becomes excessively high, when he recommends small doses of acetanalid, or antipyrine. For nervous and cerebral symptoms, should they occur. if reduction of temperature does not relieve them, he recommends the cautious use of narcotics. Meningeal complications should always be regarded as grave.

EXTIRPATION OF THE SUPERIOR MAXILLA AND THE CHEEK.

Dr. Frank Hartley, in the New York *Medical Journal*, of October 8, reports a case, in which he removed the superior maxilla. The patient, aged sixty-six years, first sought relief from what appeared to be a wart upon his cheek, below the infra-orbital margin, which gradually increased in size, until it finally involved the greater part of the cheek.

A complete extirpation of the growth was attempted. It required the complete removal of the superior maxilla and cheek. Skin-grafts were taken from the thigh and used to cover the surface. The recovery from operation and the healing and union of the grafts were uneventful. The patient remained in the hospital two and a half months, was discharged with instructions to return in one year, for plastic operation, if no return of disease occurred. On May 15, the operation for the purpose of closing the large cavity, was done.

A large flap of skin, six by eight inches, was taken from the neck and turned upon itself, so as to have the skin take the place of the mucous-membrane, in the oral cavity. The suturing of this flap was accomplished by uniting the edge of the skin, which now took the place of the mucous membrane of the oral cavity, to the inner edge of the furrow surrounding the original cavity, and made by the removal of a strip three-eighths of an inch wide. Catgut sutures were used and skin grafting was made use of to cover the surface expressed by the flap. The solution used was six parts of chloride of sodium, in one-thousand parts of boiled water. The union of the flap to the surrounding tissue as well as the skin grafting, was a complete success.

The case is of interest, on account of the extensive removal of tissue, the successful skin-grafting over bone, and the formation of the whole cheek.

PUERPEAL SEPTIC RINFECTION.

Dr. W. P. Manton, in an address delivered at the twenty-third annual meeting, of the Detroit Academy of Medicine, September 13, 1892, said: Puerperal septic infection, is rarely met with to-day, save as manifested in the occasional case by the temporary rise of temperature within the first few days post-partum.

The rapidly fatal poisoning, due to the sudden entrance of an overwhelming quantity of toxic material into the general circulation, has well nigh passed into history and the young accoucheur, who can add such a case to his experience sees that which, in the not distant future will be considered one of the most infrequent of puerperal complications.

The employment of antiseptics and increasing knowledge of the pathology of septic processes, have almost driven from the lying-in room a host of secondary effects of infection, which formerly were prevalent. Phlegmasia-abba-dolens, (milk-leg) is now a comparatively rare occurrence; septic ulcerative endocarditis is seldom if

ever seen now by the general practitioner, and metastatic complications, in distant organs have become of less interest because of their uncommonness.

The practice of obstetrics, has been revolutionized in less than half a century. Its advance from year to year has kept pace with its sister art and science, surgery. We, who to-day stand on the verge of the millenium of midwifery, can barely appreciate that dark and terrible era, through which our forefathers fought toward the light of knowledge and success.

Medical history offers no more interesting, or instructive page than that on which is recorded the evolution of the obstetric art.

Selected Formulæ.

CONSTIPATION.

℞ Aloin.....1-5 gr.
Ext. bellad.....⅛ gr.
Ext. nux vomica.....¼ gr.
Papoid.....iss gr.
M.—Ft. pill No. 1. (Use no water to form mass.) (Keep in air-tight vials.)
Dose, one pill once or twice a day.

CONSTIPATION.

℞ Ext. cascaræ sagradæ fl.....
Glycerinæ.....āā..f ʒ i M xx.
Aquæ, qs. ad.....f ʒ ij.
M. et Sig.—ʒ i. at bedtime to a young infant.

When the stools are hard and clay-colored, the following has been recommended by Ringer:

℞ Resinæ podophylli.....gr. i.
Alcoholis.....f ʒ i.
M. et Sig.—1 or 2 drops on sugar t. i. d. to infant one or two months old.

TRAUMATIC TETANUS.

Dr. Mayer, of Amberg, reports a cure from the use of a mixture containing in each dose:

℞ Muriate of morphine.....1-65 gr.
Chloral hydrate.....1½ grs.
Bromide of sodium.....2¼ grs.
Sig.—To be taken three to six times a day.

Fifteen grains of morphine were taken in all.

RHEUMATIC BRONCHITIS.

℞ Sodii salicylatis.....ʒ vi.
Glycerinæ.....ʒ iv.
Vini colch, rad.....ʒ vi.
Syr. scillæ comp.....ʒ iss.
Tr. opii camph.....ʒ ij. M.
Sig.—A teaspoonful every three or four hours, in a little water.

—*Dr. N. S. Davis.*

EMBALMING FLUID.

The following is quoted by a writer in the *Phar. Era:*

℞ Potassium chlorate.....
Chlorinated lime.....
Arsenious acid.....āā..ʒiv.
Corrosive sublimate.....ʒii.
Aluminum, sulphate.....ʒvi.
Water.....2 quarts.

HYPERTROPHY OF THE TONSILS.

Syrup of the iodide in combination with cod-liver oil; the tonsils painted once daily with one of the following:

℞ Tinct. ferri. chlor.....f ʒ i.
Glycerinæ.....f ʒ ss.
M. et Sig.—Apply.

℞ Ammon. iodidi.....gr. x.-ʒ ss.
Glycerinæ. .....f ʒ i.
M. et Sig.—Apply every night with brush.

—*Waring.*

℞ Liq. ferri perchlorid.....f ʒ ss-i.
Glycerinæ.....f ʒ i.
M. et Sig.—Paint over tonsils once or twice daily.

—*Mackenzie.*

℞ Liq iodini comp.....f ʒ ij.
Glycerinæ, qs. ad.....f ʒ i.
M. et Sig.—Paint once daily.

—*Starr.*

In marked hypertrophy the solid nitrate of silver point may be passed into the follicles of each gland and then applied over the whole mucous surface every other day. Should this fail, excision must be resorted to.—*Powell, Essent. Dis. Children.*

TOOTHACHE.

The following formulæ are given in an Italian medical journal:

℞ Sozoiodolate of soda.....1 part.
Sozoiodolate of potash.....2 parts.
Glycerine to form a paste.
Put one or two drops into the cavity.

℞ Chloroform.....14 parts.
Mastic.....8 "
Peruvian balsam.....5 "
Dissolve the resins in the chloroform. Two or three drops into the carious cavity.

℞ Extract of opium. } āā.....1 part.
Camphor.....
Peruvian balsam.. } āā.....2 parts.
Mastic.....
Chloroform.....20 "

℞ Chloroform.... } āā.....eq. parts.
Laudanum..... }
Creosote..... } āā.....3 "
Tincture of benzoin.. }

℞ Chloral hydrate. } āā.....5 parts.
Camphor..... }
Cocaine.....1 "

℞ Creosote..... }
Essence of peppermint.. } āā.....2 drops.
Camphorated oil..... }
Essence of violets.....5 "
Cocaine.....mgm 15 (gr. ¼(.
Chloroform.....q. s.

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THE MEDICAL AND SURGICAL REPORTER.

SATURDAY, OCTOBER 22D, 1892.

THE OPERATION OF SYMPHYSIOTOMY.

The sudden advocacy of symphysiotomy in this country indicates the progressive tendency in medicine. Within a short time the operation has been performed three times by different operators, once in Brooklyn and twice in this city, thus gaining recognition after a period of neglect covering the history of obstetrics in this country. In looking into the question as to the occurrence of suitable cases co-incidentally in the hands of these different operators we are lend to wonder at the causes which have influenced the profession to adopt this new departure. For this we must look first to the results obtained in the present year by European operators, and, secondly to the influence upon the progress of medicine in this country of the German writers. The resumption of symphysiotomy as a modern operation is to be credited to the Italian school, but its promotion in this country was delayed until we were given the results of the recent German workers in this field, namely, Leopold and Freund. The former of these operators has produced a deep impression upon his followers by his commendation of this procedure, on account of the stand which he has until recently taken in favor of Cæsarean section. His attitude will, therefore, strengthen the position of those who believe that symphysiotomy can replace Cæsarean section.

If after careful consideration symphysiotomy is accepted in this country it will probably have the effect of limiting the number of sections, for two reasons; in the first place because of its comparative simplicity and second on account of its claim upon the non-professional world for humanitarian reasons. The cases in which Cæsarean section is indicated will always remain distinct from those in which symphysiotomy is called for.

Symphysiotomy may prove a restriction to the growing leniency toward the Cæsarean operation for "relative indications," perhaps, also, to the frequency of craniotomy. There may be a danger of drifting into a too frequent resortto this simple operation to save the child, in the belief that we are entailing but a slight risk to the mother. There is still a greater danger of this new operation becoming a "fad" with notoriety-seeking specialists whose "brilliant work" has supplied monumental marks in the history of modern abdominal surgery.

In the hands of judicious surgeons the procedure may be of use, and we hope that the subject will receive the fullest attention; not that it may unwisely increase the surgical tendency in obstetrics, but that it may lead to more exact study of indications and to greater care in the early management of cases at the hands of the profession..

Book Reviews.

A Manual of the Operations of Surgery for the the use of Senior Students, House Surgeons and Junior Practitioners. Illustrated. By Joseph Bell, M. D., F. R. C. S., Edin. Seventh Edition, Revised and enlarged. Edinburgh: Oliver & Boyd, Tweeddale Court. London: Simpkin, Marshall, Hamilton, Kent & Co. Price, six shillings.

This work has been rewritten and brought up to date. The different operations are described in a simple and concise manner, all reference and discussions are carefully omitted. The chapter on eye operations is well written and worthy of careful study.

One thing noticeable, that the author says nothing concerning antisepsis or wound dressing.

The work is nicely bound and printed.

The Principles and Practice of Bandaging, by G. G. Davis, M. D., Assistant Demonstrator of Surgery, University of Pennsylvania, etc. George S. Davis, Publisher, Detroit. Price, Cloth, $3.00.

The author claims that the best results in surgery, especially fractures, can only be obtained by understanding the principles and the thorough application of the bandage.

The work is thorough and clear. The fundamental principles are plainly set forth. The art of skillfully applying bandages, should be acquired by every student. This work serves as a practical guide. The book is profusely illustrated.

Mental Diseases; Epitome of; including their Classification, Synonyms, and Symptoms, their Etiology, Diagnosis and Treatment, with the Present Methods of Certification of the Insane, by James Shaw, M. D., formerly Medical Superintendent, and Co-Licensee, Haydock Lodge Asylum, London.

Its Semi-Dictionary form of compilation makes its ready reference exceedingly convenient for practitioners and students and forms a valuable introduction to the more comprehensive treatises and exhaustive monongraphs. The work is largely a compilation from the bibliography of the subject, yet the author has stamped his own individuality as a specialist upon the book by observations and experiences both in Asylum and private practice. Its several chapters are devoted to:

I. Definitions of Insanity and Classification of Mental Diseases.

II. Index of Symptoms Somatic, Physiological, and Psychical, with the Mental Diseases in which they occur.

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One octavo volume. Illustrated. Uniform with Medical Classics. Morocco cloth. Price, $2.75. Published by E. B. Treat & Co., 5 Cooper Union, New York.

BOOKS RECEIVED.

Practice of Medicine, by Edwin T. Doubleday, M. D., Member of New York Pathological Society, and J. D. Nagel, M. D., Member of New York County Medical Association. $1.00. Students' Quiz Series, No. 6.

Gynecology, by G. W. Bratenahl, M. D., Assistant in Gynecology, Vanderbilt Clinic, New York, and Sinclair Tousey, M. D., Assistant Surgeon, Out Patient Department, Roosevelt Hospital, New York. $1.00. Students' Quiz Series, No. 12.

Genito-Urinary and Venereal Diseases: A Manual for Students and Practitioners, by Charles H. Chetwood, M. D., etc., Philadelphia, Pa.: Lea Bros. & Co. Price, $1.00. The Students' Quiz Series.

Obstetrics: A Manual for Students and Practitioners, by Charles W. Hayt, M. D; Lea Bros. & Co., Philadelphia. Price, $1.00. The Students' Quiz Series.

Materia Medica and Therapeutics: A Manual for Students and Practitioners, by L. F. Warner, M. D., Philadelphia: Lea Bros. & Co. Price, $1.00. The Students' Quiz Series.

Gonorrhœa and its Treatment, by G. Frank Lydston. George S. Davis, Publisher, Detroit, Mich. Price, 25 cents.

Transactions of the Michigan State Medical Society for the year 1892. Vol. XVI.

Proceedings of Philadelphia County Medical Society for the year 1891. Vol. XII.

A Text Book of Diseases of the Skin, by John V. Shoemaker, A. M., M. D.. Professor of Dermatology in the Medico-Chirurgical College of Philadelphia. 8 vo. With Six Chromo-Lithographs and numerous Engravings. Cloth, $5.00; sheep, $6.00.

Characteristics, by S. Weir Mitchell, M. D., LL.D. (Harvard). New York: The Century Co., 1892.

Periscope.

THERAPEUTICS.

THE TREATMENT OF STAMMERING.

For some reason or another the treatment of stammering has never received the attention it merits at the hands of the profession. Its victims are left to fight their way as best they can, and should they dream of better things they are fain to apply to one or other of the quacks—this is, perhaps, a harsh name to apply to some of them—who profess to cure a distressing and disabling infirmity. It is, indeed, a reproach to the medical profession that the treatment of a functional defect of this kind, in the majority of instances, more or less amenable to rational measures, should have been abandoned to outsiders. A good deal has been written with respect to the etiology of stammering, but it is obvious that the want of coordination between the different factors of articulate speech may result from an imperfection in any one of them, and the possible causes of stammering are thereby multiplied almost indefinitely. The least promising cases are evidently those in which the embarrassment is due to what one may term an intellectual chorea. Even in these, however, immense improvement is possible by combined mental and physical training. Moreover, the psychological deficiency is often more apparent than real, and may merely be the result of years of exaggerated self-consciousness created by a ridiculous defect. In other cases the coordinating centre seems simply to get out of gear. An attack of whooping-cough or measels, a fright or other strong emotion, may determine a hesitation which can only be overcome by a course of training. We have recently had an opportunity of witnessing some really remarkable and prompt "cures" of stammering in both children and adults by suitable training, and these results fully justify the claim we have advanced for a greater share of attention.—*Medical Press.*

TETANUS CURED BY TETANUS ANTITOXIN.

E. Pacini (*Rif. Med.*, January 7th, 1892) reports a cure of traumatic tetanus by the tetanus antitoxin of Tizzoni an d Cattani (see *British Medical Journal*, January 2d, 1892, p. 25). A man, aged 21, slightly wounded the tip of his left ring finger with a reaping hook in a stable where there were some oxen, rabbits, and a goat. He washed the wound with wine and tied a piece of rag around it, continuing to do his work as before. About ten days after the accident, which occurred on October 25th, he began to feel some difficulty in opening his mouth, and on November 12th he was admitted to the Hospital of the Colle di Val d'Elsa (Tuscany) with well marked tetanus. He was treated with chloral (6 to 8 grammes in the twenty-four hours, in 2-gramme doses) for some days, but as the symptoms became more severe, a supply of antitoxin was procured from Professor Tizzoni, of Bologna, and, the chloral treatment having been suspended for some hours, 25 centigrammes of antitoxin, obtained from the blood serum of a dog which had been artificially rendered refractory to tetanic infection, were injected hypodermically at 10 a. m. on November 19th. This was repeated at 4 p. m. the same day. In the evening the patient was quieter, the convulsions being less violent, and he was able to open his mouth for about half a centimetre, and to move his head a little. The wound had by this time completely cicatrized. The injections were repeated twice daily on November 20th, 21st, and 22nd. From that time the symptoms became gradually less severe, but it was not till December 9th that the patient could be discharged, being then entirely free from trismus and spasms, and complaining only of some difficulty in opening his mouth, and slight aching along the spine and in the lower limbs. From the report of the case, which is given in great detail, the effect of the antitoxin does not appear to have been very well marked till after the eighth injection. The number of tetanic spasms, which had been 296 in the twenty-four hours on November 19th, 505 on the 20th, 304 on the 21st, 358 on the 22nd, fell to 174 on the 23rd, to 130 on the 24th, and so on by the regular descent, with slight interruptions, to 1 on December 5th. On two occasions during the antitoxin treatment (November 20th and 21st) when the spasms were particularly violent, chloral was given in 2-gramme doses, and after the discontinuance of the injections a similar draught was given every night. With this excep-

tion no treatment is recorded as having been employed after November 22nd.—*Brit. Med. Jour.*

MEDICINE.

THE VALUE OF ALBUMINURIA AS A MEANS OF DIAGNOSIS.

In a paper on this subject in the *International Medical Magazine* Dr. F. R. Sturgis, of New York, concludes from a survey of the literature that albumin in the urine does not necessarily signify any renal disease; that it exists temporarily in many diseases unassociated with any organic renal complication; that from the uncertainty of tests and methods of testing it loses a great deal of its value as a diagnostic sign; and that if present in even a small quantity it is a danger-signal, and if persistent indicates some serious organic lesion.

THE ETIOLOGY OF EPILEPSY.

Walton and Carter (*Boston Medical and Surgical Journal,*) have made a study of the connection between epilepsy and infantile convulsions. By careful scrutiny and elimination of doubtful cases, they were able among two thousand five hundred and thirty-nine cases of all kinds applying at the neurological department of the Massachusetts General Hospital, to isolate one hundred and thirty-three cases of epilepsy —5.25 per cent. In time of onset, they were divided as follows: From birth to five years, twenty cases(15 per cent.); from six to ten years, eighteen cases (13.5 per cent.); from eleven to fifteen years, twenty cases (15 per cent.); from sixteen to twenty years, nineteen cases (14.33 per cent.); from twenty-one to thirty years, thirty-five cases (26.33 per cent.); from thirty-one to forty years twelve cases (9 per cent.); from forty-one to fifty years, three cases (2.25 per cent.); from fifty-one to sixty-five years, four cases (3 per cent.); unknown two cases (1.5 per cent.). Of seventy successive cases of pure epilepsy in hospital and in private practice, in which careful inquiry was made as to the occurence of convulsions in infancy, both in the patient and in brothers and sisters, nine commenced in infancy and became continuous, fifty-six presented no history of convulsions in infancy followed by a period marked by an absence of convulsions. It was found that among the brothers and sisters of epileptics, convulsions in infancy were more common than among the epileptics themselves. Of one thousand children consecutively taken at random from society, Walton and Carter elicited a history of convulsions in infancy in one hundred and eleven. It has been estimated that there are about six epileptics in every thousand of population; as convulsions in infancy are observed in one of fourteen cases (five in seventy) of epilepsy, the two affections occur coincidently once in not less than 2000 individuals; and as convulsions in infancy are observed in 222 of every 2000 (111 in 1000) individuals, fhe chance that a chlld presenting convulsions in infancy will develop epilepsy later in life is 1 in 222. The conclusion to be arrived at is that epileptics are at least not more likely than others to have had convlusions in infancy, and that conversely, a child that has had convulsions in infancy is not more liable than any other to develop epilepsy later in life, after a period marked by freedom from attacks has removed the case from the class of epileptics in which the convulsions begin in infancy and become continuous.

SURGERY.

THE SURGERY OF THE TONGUE.

In an excellent paper on this subject read before American Surgical Association, May 31, 1892, Dr. Danbridge presented the following conclusions:

1. Sufficient experience has been accumulated to show that removal of cancer of the tongue prolongs life, adds to the comfort of the patient, and further affords a reasonable hope of permanent cure.

2. All operations should be preceded by an effort to secure thorough disinfection of the mouth and teeth.

3. In the treatment of continued ulcers and sores on the tongue, caustics are to be avoided and all sources of irritation removed.

4. Persistent sores on the tongue should be freely removed by knife or scissors if they resist treatment.

5. When the disease is confined to the tongue, Whitehead's operation should be employed for its removal.

6. In this operation the advantage of preliminary ligation of the lingual artery

is not definitely settled, but the weight of authority is against its necessity.

7. The advantage of leaving one-half the tongue in unilateral disease must be considered undetermined, but the weight of positive experience is in its favor. In splitting the tongue into lateral halves, Baker's method of tearing through the raphe should always be employed.

8. A preliminary tracheotomy adds an unnecessary element of danger in the removal of the tongue in ordinary cases.

9. When the floor of the mouth has become involved or the glands are enlarged, Kocher's operation should be employed, omitting the spray and preliminary tracheotomy.

10. Removal of the glands by a separate incision after the removal of the tongue, must be considered insufficient.

11. Volkmann's method still rests on individual experience. Its just value cannot be determined until it has been subjected to trial by a number of surgeons.

12. Thorough and complete removal should be the aim of all operations, whether for limited or exteme disease.

13. By whatever method the tongue is removed, the patient should be up and out of bed at the earliest possible moment, and should be generously fed.—*Journal of the American Medical Association.*

A SIMPLE AND ECONOMICAL FORM OF TRACHEOTOMY TUBE.

A very efficient tracheotomy tube for use after the tract has become fairly free by wearing a silver tube for two or three days, can be made with a piece of India rubber drainage-tube in the following manner: An oval piece is cut out of one side of the tube, the shorter diameter of the oval reaching about half way around the tube. Two longitudinal cuts are then made, one on the same side as the oval opening and the other opposite to it, reaching from the end of the tube to a point about a quarter of an inch from the opening; this distance will, however, vary with the depth of the wound that the tube is to be inserted into. In the lateral flaps made by these longitudinal incisions holes are cut for tapes. The piece of tube beyond the oval opening is the part which is put into the trachea. This tube has the following advantages: 1st. It fits the trachea well, having an angle instead of a curve, and tilting of the lower end cannot occur to cause pressure and ulceration. 2d. The window allows laryngeal respiration to take place as soon as the diminution of the swelling has made the glottis patent. 3d. The cost of the tube is practically *nil*. 4th. Being made of drainage-tubing it is nearly always at hand.—(*Brit Med. Journal*).

REMOVAL OF THE VERMIFORM APPENDIX IN THE APYREXIAL STAGE OF PERITYPHLITIS.

Dr. Kümmell read an article at the Surgical Society of Hamburg (*Duetsche Med. Wochenschrift*, No. 11, 1892), in which he reported six cases in which he had removed the vermiform process. The author believes that the remote cause of a perforation is a catarrhal inflammation, and that fecal-calculi, etc., are secondary to this. As a consequence of the inflammation a stricture is developed; behind this a cavernous dilatation occurs, which becomes filled with fecal matter and pus, and finally ruptures, permitting the escape of the contents into the peritoneal cavity. In four of the six operated cases perforation had taken place.

1. The first case was a woman who had had many attacks and was never free from trouble. The appendix was ulcerated in two places. The vermiform appendix and cecum were resected. The patient was dismissed cured.

2. A female patient who had suffered from many attacks. The appendix was removed; the patient was dismissed cured.

3. A male patient who had passed through two attacks before the operation. The case was an unfavorable one, because the perforation was situated at the opening of the appendix into the cecum. The vermiform process ruptured during the operation. The wound in the cecum was closed; but the patient suffers constant annoyance, probably from adhesions which have formed.

4. In this case, a male patient, the perforation was located at the same point as in the last. The sutures did not unite, and a second union was necessary. The patient afterward contracted typhus, and is still under treatment.

5. A woman, 40 years old, who had four attacks. An exudation was distinctly recognizable. The vermiform process was removed. Perforation had not yet

taken place. The patient was dismissed cured.

6. A man, 38 years of age, who had had fifteen attacks. A stricture of the appendix was distinctly recognized, and behind it, a small fecal stone. The case is now in a fair way to recover.

McBURNEY AND APPENDICITIS.

Dr. McBurney, in reportiug a number of cases of appendicitis to the New York Academy of Medicine again calls attention to the comparative frequency of the trouble. Its assumed rarity in former years is explained by the fact that the disease was not understood. Foreign bodies, fæces and other sources of irritation easily set up inflammation. A moderate rise of temperature (99–101) occurs with a feeling of nausea, followed by vomiting. There is abdominal pain, often diagnosed as mere colic, and tenderness of the more or less rigid abdominal muscles. The point of greatest tenderness is found over a spot about two inches from the superior anterior iliac spine on a line extending from this point to the umbilicus. (Our readers will know that this is briefly referred to as the McBurney point.) On deep palpation a tumor may often be felt marking the seat of impactive swelling and inflammation. Suppuration ordinarily takes place; although under hot applications, opium, etc., the attack may be soothed down. The abscess is surrounded by a more or less developed pyogenic wall. Exacerbations may come and go, but with perforation death is sure to come. Primary operation interference is always indicated; delay means inviting uncontrollable danger The most urgent cases are those of acute suppurative disease with perforation and gangrene of the appendix. The diagnostic signs pointing in this direction are: *sudden* severe pains on second day over McBurney joint; rapid subsequent rise of temperature, existence of a palpable sensitive tumor. Ordinarily an incision 4½ inches long should be made about one inch outside of the linea semilunaris. Examine carefully the caput coli; remove all pus; ligate appendix and disinfect with cautery; pack with antiseptic gauze and recovery is rapid and undisturbed.—*New York Medical Record.*

NEWS AND MISCELLANY.

As a recent notice in this journal has informed our readers, the Eleventh International Congress will meet in Rome, Italy, from September 24th to October 1st, 1893. By an official letter dated August 22nd, 1892, and signed by Prof. Guido Baccelli, president, and Prof. E. Maragliano, secretary general, Dr. A. Jacobi, of New York, has been directed to form an American Sub-Committee. Its membership is not yet complete, but on it are already found besides that of the chairman, the names of Drs. Wm. Osler, of Baltimore; S. C. Busey, of Washington; N. S. Davis, of Chicago; Charles A. L. Reed, of Cincinnati; Wm. Pepper, of Philadelphia; F. Peyre Porcher, of Charleston; James Stewart, of Montreal, and Alexander J. C. Skene, of Brooklyn, N. Y. In the interest of facilitating the trip to Italy, and reducing the expense, arrangements will be made with the steamship companies. According to a communication from the Central Committee—contained in a letter of the secretary general's dated September 14th—the North German Lloyd proposes to reduce the fare to Genoa twenty per cent., and that of the return trip by ten per cent. It is expected that still more favorable terms will be secured.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY FROM OCTOBER 9, 1892, TO OCTOBER 15, 1892.

Leave of absence for one month is granted Captain Henry P. Birmingham, Assistant Surgeon, U. S. Army.

Leave of absence for fifteen days is granted Major Daniel G. Caldwell, Surgeon, U. S. Army.

By direction of the Acting Secretary of War, paragraph 3, S. O. 199, Aug. 24, 1892, A. G O. is revoked and Captain Louis M. Mans, Assistant Surgeon, U. S. Army, is relieved from duty at Fort Apache, A. T., and will report in person without delay, to the commanding officer, Whipple Barracks, Arizona, for duty at that station.

1st. Lieutenant Isaac P. Ware, Assistant Surgeon, U. S. Army, is relieved from duty at Fort Logan, Colorado, and will proceed without delay to Fort Supply, Indian Territory, and report in person to the commanding officer of that post for duty.

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He has found that the phenic salt exercises an analgesic action much more persistent than that of the muriate, while the chances of producing toxic effects are much less. Gluck was accustomed to add carbolic acid to his solutions of cocaine for the purpose of diminishing the chances of producing disagreeable results. These properties and advantages are explained by the fact that the phenic salt is almost entirely insoluble in water. Not being dissolved by the juices of the organism, the phenate of cocaine, employed as a local application, is absorbed but little or not at all, whence the absence of intoxication and the persistence of the analgesic action, which may last as long as thirty-six hours. Phenate of cocaine may be given internally as well as in hypodermic injection.—*La Semaine Med.*

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BY HERMANN GOLDENBERG, M. D.

It is well known that pyrogallic acid is by no means a harmless drug. After its introduction into dermatological practice NEISSER lost a patient after one application. The patient died on the third day with symptoms of intoxication. VIDAL has likewise reported the death of a patient, eighteen years old, who had used a ten per cent. pyrogallic ointment for two weeks. This poisonous effect of pyrogallic acid is to be attributed to the great readiness with which it is oxidized in alkaline solutions (being so intensely reducing).

Gallacetophenone does not possess this quality and is absolutely harmless, as has been proven by experiments on animals.

It displays strong antiseptic qualities. A one per cent. solution added to chopped meat prevented its becoming putrid for twenty-one days, and destroyed the *Streptococcus aureus* within twenty-four hours.

Since the middle of October I have employed it, both in private and in dispensary practice, on at least thirty patients suffering from various skin diseases.

On account of its resemblance to pyrogallic acid, it seemed to be indicated in psoriasis. I have been so much more inclined to use it in that disease, since VON REKOWSKI, who tried it in a few cases only, maintains "that the effect of this new preparation (used as a ten per cent. ointment) is noticed within twelve hours."

Altogether, I have thus employed it in twelve cases of psoriasis—in all of them with good results. Within a few days the patches became paler and thinner, the desquamation ceased or became less, and involution took place in the centers. Usually after the lapse of from ten to twelve days only a slight hyperæmia was left. Within from two to three weeks the patches disappeared entirely without leaving any pigmentation.

A ten per cent. ointment did not produce any marked irritation or discolor the skin. It stains the clothes slightly yellowish, much less than pyrogallic acid or chrysarobin. In the case of psoriasis of the face and scalp it really acted like a specific. The eruption, which was quite profuse, disappeared within five days. A ten per cent. ointment was applied twice daily. There was no other treatment

Another patient with a universal psoriasis of sixteen years' standing, who applied to my department at Mount Sinai Dispensary for some other trouble, was induced to use a ten per cent. salve of gallacetophenone for the forehead and scalp, which were thickly covered with psoriatic patches. When he returned, two weeks later, there was nothing left but a pigmentation of the forehead, while the psoriasis of the body which had not been treated was *in statu quo ante.*

My friend, DR. G.T. ELLIOT, has, at my request, used gallacetophenone on a patient with psoriasis of eight years' standing, distributed over the trunk, knees, elbows, scalp, and face in patches of various sizes. The case had been under treatment the whole time and had proved exceedingly rebellious. Arsenic caused an increase of inflammatory symptoms. Pyrogallic acid had been used with but moderate success. Chysarobin did well, if used persistently. At the time (November 21st) when the use of a ten per cent. gallacetophenone ointment was begun, the patches were bright red, burning, and with abundant desquamation. A week later the patches were paler and breaking up into small papules. The centers had undergone involution and the desquamation was very little. Under the further use the improvement continued. DR. ELLIOT concludes his report with the following words: "From this slight experience, gallacetophenone appears to me to promise to be the most satisfactory local remedy for psoriasis and superior to all others. It produces no inflammatory reaction or pigmentation, but seems to influence immediately the lesions."

From my experience, I feel justified in recommending gallacetophenone as an excellent remedy for psoriasis, for it acts in some cases more promptly than chrysarobin—in all the cases which I have treated, as well if not better than the other remedies at our disposal. As it is harmless and does not discolor the skin or hair, I hope it will be found to be one of the best local remedies for psoriasis of the body, face, and scalp.

My results in a number of cases of eczema psoriti-forme and seborrhoicum have been so gratifying and encouraging that I should like to include these affections in its field of usefulness.—*N. Y. Med. Jour.*

JULIA W. CARPENTER, M. D., (*Cinn. Lancet Clinic*), also speaks of the rapid, almost specific, action of GALLACETOPHENONE in a very rebellious case of psoriasis.

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THE
MEDICAL AND SURGICAL REPORTER.

No. 1861. PHILADELPHIA, OCTOBER 29, 1892. Vol. LXVII—No. 18

Original Articles.

TYPHOID FEVER—ETIOLOGY, PATHOLOGY, DIFFERENTIAL DIAGNOSIS AND TREATMENT.

By W. R. BLAILOCK, M. D.,
M'GREGOR, TEXAS.

Short, concise papers on occasions of this kind are more appropriate and better received than long, statistical ones, but to write briefly and comprehensively where so much is involved would require more skill in writing than I possess. A short, crisp, full and comprehensive definition of a disease, affecting so many parts of the body and attended by such a multiplicity of symptoms as the one under consideration, from its inception to its close, is difficult to produce. Such a definition is desirable because under the head of Differential Diagnosis a continued fever believed by many to be a different, and distinct fever will be considered. In Pepper's "System of Medicine" typhoid fever is thus defined—"An endemic infectious fever, usually lasting between three and four weeks and associated with constant lesions of the solitary and agminate glands of the ileum, and with enlargement of the spleen and mesenteric glands. Its invasion is usually gradual and often insidious. Sometimes the only symptoms present in the beginning are a feeling of lassitude, some gastric derangement and a slight elevation of temperature; at others there are slight rigors or chilly sensations, headache, epistaxis, diarrhœa and pain in the abdomen. The principal symptoms of the fully-formed disease are a febrile movement possessing certain characters,—headache passing into delirium and stupor, diarrhœa associated with ochery-yellow stools, tympanitis, pain and gurgling in the right iliac-fossa, a red and furred tongue which later often becomes dry, brown and fissured; a frequent pulse; an eruption of rose-colored spots occurring about the seventh or eighth day, slightly elevated above the surface, disappearing under pressure and coming out in successive crops, each spot lasting about three days; prostration not marked in the beginning, but rapidly increasing and occasionally deafness, sweats and intestinal hæmorrhages."

When recovery takes place the convalescence is usually tedious and may sometimes be protracted by the occurrence of one or more relapses. Typhoid fever occurs in males and females with equal frequency, in infancy or old age, but is more common under the age of thirty years.

Recent arrivals in an infected locality are more apt to contract the disease than residents.

It is more prevalent during the latter part of summer and early autumn, though it may prevail at any season of the year.

After hot, dry summers and when the water used for drinking purposes gets low it is more apt to prevail. Often heavy rains following a drouth arrest the spread of the fever. Under ordinary circumstances the period of incubation is about two weeks, but in this there are exceptions, fever may begin in three or four days, or not until three or four weeks after exposure. Diarrhœa usually occurs early, the stools being ochery-yellow or dark, following the administration of a purgative or coming on of its own accord. Sometimes constipation persists throughout the disease even in cases that terminate in perforation. Pain in the abdomen usually accompanies diarrhœa.

The abdomen is often tympanitic with gurgling and tenderness in the right iliac fossa. Sir Wm. Jenner says, "Whether there is much distention of the bowel or

not, the convexity of the abdomen is always from side to side, not from above downward, tub-shaped not pot-bellied." The tongue is usually coated, with red edges, pointed, becoming dry, sometimes flaccid or uniformly red and glistening or glazed, or remaining moist throughout. Jenner says, "The small, dry tongue with red tip and edges, smooth furred of a pale brownish color and fissured, the surface seen between the fissures being of a deep red, may be considered differentially as diagnostic of typhoid fever. The tongue is often tremulous and protruded with some difficulty. A papular or pimply eruption consisting of little circular or lenticular spots of a bright-rose color that disappear under pressure, returning as soon as the pressure is removed, appear usually on the seventh or eighth day, but may be deferred until the twentieth day. These spots are sometimes absent in adults and often absent in children. Murchison found them present in 4,606 cases out of 5,988. They usually occur on the abdomen or chest, but they are frequently found on the back, sometimes on the hands and face. These spots frequently do not appear until after the application of a poultice. They come in successive crops each lasting about three days and the number present at one time, according to Watson, varies from one to sixty. No relation has been proved to exist between the copiousness of the eruption and the severity of the disease.

The hair usually falls out after an attack of typhoid fever.

Bronchitis is a common accompaniment. Headache is almost a constant symptom, usually referred to the forehead, often dull and not much complained of, but sometimes excruciating, simulating acute meningitis. Mental hebetude is usually present, but many cases have been reported ending in perforation and death where this condition was absent. Delirium varies with the severity of other symptoms, in the milder form consisting of only slight confusion of ideas easily dispelled by fixing the patient's attention. It may come on in three or four days, often not until the second week, sometimes as late as the fourth week.

In cases of long duration there is sometimes mental disturbance coming on when the fever subsides, amounting to mild insanity. The spleen is sometimes enlarged so that during the second week it may be detected by percussion but it is often difficult on account of tympanitis, to detect it by palpation. Intestinal hemorrhage may occur during the first week, but oftener from end of second week on. Prostration, approaching collapse, the pulse growing weak and thread-like, the surface bathed in a clammy sweat, the temperature rapidly falling indicate hemorrhage. After these symptoms a discharge of blood will likely occur in a few hours or two or three days. The temperature usually rises again after a hemorrhage has occurred.

Perforation is accompanied by nearly the same symptoms less the rapid fall of temperature and with the addition of sharp and severe pain in the abdomen and the occurrence of general peritonitis in a few days. The absence of liver dullness is considered diagnostic of perforation though it may be present after perforation; case of this kind was reported recently in the *N. Y. Med. Journal.*

Etiology: — Murchison says: "The poison of enteric (typhoid) fever is contained in the emanations from certain forms of putrefying organic matter. Pathogenic (typhoid) fever is often generated spontaneously by fecal fermentation. It is occasionally communicated by the sick to persons in health."

In 1880 Eberth discovered a bacillus which is now generally conceded by pathologists to be constantly present in the spleen and intestinal glands of typhoid cadavers, and that it stands in an etiological relation to this disease. Many experiments have been made with pure cultures of this bacillus, but as none of the lower animals have typhoid fever as it occurs in man, they have not been altogether satisfactory. Dr. Victor C. Vaughn has found that certain toxicogenic germs found in drinking water produce the same lesions in animals as the Eberth bacillus.

Dr. Sternburg in an address on medicine at Yale University, June 28, 1892, sums up the results of experiments with Eberth's bacillus: "It has been shown that this bacillus as obtained from the spleen of typhoid cadavers varies somewhat in different cases, that very similar bacilli may be obtained from water contaminated by sewage, etc., which differ from the typhoid bacillus in certain characters of growth, and yet resemble it so closely, that it is still uncertain whether they are to be considered distinct species or only varieties of

the typhoid bacillus; that the character which was at first supposed to distinguish the typhoid bacillus from all others, viz; its invisible growth upon potato has proved to be unreliable inasmuch as certain other bacteria have been shown to have a like invisible growth, and under certain circumstances the typhoid bacillus may form a visible growth upon potato."

Dr. J. Karlenski has recently published the results of two years' experiments with pure cultures of typhoid bacilli, typhoid dejecta and pieces of organs from typhoid cadavers, buried in earth that was humid, or approached natural conditions.

He ascertained that the longest time the bacilli remained alive in soil was three months. The life of the bacilli in typhoid dejections buried in soil was much shorter than in pure cultures under the same conditions. The deeper the bacili were buried and the less exposed to sunlight the longer the vitality.

He also found living typhoid bacilli at the end of three months in the organs of persons dead of typhoid fever where the conditions of inhumation were such as to exclude the specific organisms of putrefaction. Typhoid bacilli are widely distributed and do not always produce a specific effect, when introduced into the alimentary canal.

For the past three years I have made numbers of potato cultures from fecal matter passed by patients during the second and third weeks of fever.

At first the bacilli found in undoubted typhoid seemed to differ in size and motion from those derived from doubtful cases. More extended cultures embracing healthy fecal matter, that from privies, and from typhoid fever where hemorrhage from the bowel has occurred, have changed that belief.

It has been claimed that typhoid bacilli and the common colon bacilli act differently upon sterilized milk, one coagulating it, the other not.

I have found no difference both coagulating it in from sixteen to twenty hours, whereas milk sterilized at the same time and in the same way has remained fluid up to the present.

Morphologically bacilli from well defined typhoid cases do not differ from those derived from healthy fecal matter. The intimate relation between drinking water polluted by human excrement and typhoid fever the acknowledged abundance and distribution of the typhoid bacillus; the necessity for other secondary causes to determine infection, as "individual susceptibility," exposure to agencies that reduce the vital resisting force, virulence and quantity of bacilli, the state of the digestive functions emphasize the probability that the colon bacillus, and Eberth's bacillus are the same.

Pathology:—The liver, kidneys, spleen and many other organs or parts of the body, are more or less affected in typhoid fever but its constant and distinguishing lesion is an inflammation of the solitary and agminate glands of the ileum.

These glands are more numerous in the lower part of the ileum and it is here that the poison is usually most active, sometimes extending only a few inches up the gut. The ileo-cæcal valve forms the lower boundary of these glands while in the other direction they extend into the lower part of the jejunum. The glands are lymphoid nodules destitute of villi, surrounded by close rows of villi and simple follicles. They are situated on the opposite side of the bowel from the mesenteric attachment. The solitary glands may be affected and Peyer's or the agminate glands remain healthy, but this is not a frequent occurrence. The process begins as a catarrhal inflammation of the mucous-membrane, followed by changes in the lymphatic follicles. Lesions in the lymphatic follicles have been observed forty-seven hours after the beginning of the fever. The enlargement of the solitary and agminate follicles may be slow or rapid, slight or so pronounced as to fill up the cavity of the intestine. Delafield and Prudden in their Pathology, Anatomy and Histology give the following summary of the changes that take place in these glands:

"(1.) If the disease was mild and the enlargement of the follicles moderate, the enlargement gradually disappears and the follicles resume their normal appearance. (2.) In moderate enlargements the retrograde processes affect first the follicles and leave the septa between them still swollen and prominent. This gives to the surface a reticulated appearance. After a time, however, the entire patch becomes flattened and uniform. (3.) The solitary follicles or the separate follicles of a patch

soften, break down and their contents are discharged with some attendant hæmorrhage. This leaves a bluish-gray pigmentation in the situation of each follicle. (4.) In more severe types of the disease, the enlargement eof the follicles ends in ulceration. This takes place in two ways: (a) The enlarged follicles soften, break down and discharge into the intestines. In this way are formed small ulcers. These ulcers increase in size by the same softening process which gradually attacks their edges, and in this way ulcers of large size may be formed. The ulcers may extend outward only to the peritoneal coat, or they may involve the peritoneal coat also and perforate. (b) In the severest forms of the disease considerable portions of the enlarged patches slough, are detached, and leave large ulcers with thick, over-hanging edges. The slough may involve only the follicles or it may involve also the muscular and peritoneal coats. These ulcers also may afterwards increase in size and several of them may be joined together."

DIFFERENTIAL DIAGNOSIS.

A differential diagnosis to meet the requirements of this occasion calls for a description of a fever very common in Texas and that has been called "continued fever, slow fever, irritative fever, typho-malarial fever," etc.

During an intimate association of ten years with this fever and carefully noting it in its every detail, I have found the following prominent symptoms: Onset of fever usually insidious, frontal headache, sometimes no pain in head, tongue usually coated, with red edges, becoming pointed and dry as fever advances. Sometimes it is broad or natural in size, either pale or red, remaining moist throughout the disease. Sharp rise of temperature during the afternoon or evening with a fall during the latter part of night and early morning.

Profuse perspirations very common during latter part of night sometimes preceded by chilly sensations and rise of temperature. Epistaxis often occurs during first week, abdomen usually tympanitic and tender in right iliac fossa. Sometimes no tenderness nor tympany exists in this locality but on the left side on a level with and below the umbilicus a circumscribed area of tenderness and tympany exists. In these cases constipation is sometimes pronounced. Bowels often loose especially after first week or following the administration of a purgative. Dejecta often a dirty yellow or brown to red brown or black in color and very fetid.

Often a papular rose-colored eruption more or less abundant on the breast or abdomen often on the back, frequently not seen until after the application of a poultice. These spots have not been observed with the same frequency as we would expect in typhoid fever, but a diligent search will reveal their presence in many cases.

Hæmorrhage from the bowels occurs sometimes. Slight delirium sometimes, only during the night, coming on usually during the second week, from which patient can be easily aroused. Subsultus is often present, occasionally profound delirum comes on and the other symptoms characterizing the typhoid condition.

New-comers are more apt to contract the fever than those who are acclimated. It is more prevalant during the summer and autumn, especially when the water gets low and noticeably bad in wells. The cause of this fever seems to be impure water.

During the past ten years, in and surrounding the town where I reside, these fevers prevailed almost exclusively, where well-water had been used for drinking purposes. A few cases have occured where cistern water was used, but the faulty manner of collecting and preserving it gives ample explanation. During 1884 a well sunk the previous year upon the business street of the town, was much patronized on account of the purgative and other supposed medicinal properties of the water. Many who used this water had the fever. A chemical examination revealed the presence of albuminoid ammonia.

During the early days of McGregor and up to a year ago many of her citizens used well-water, others brought water from portable tanks that were supplied with water from springs far removed from fecal contamination. These wells are sunk in porus shelly and fissured rock to a depth of from fifteen to thirty feet where a compact blue limestone is encountered. This blue limestone is the lower limit of the surface, water bearing, rock and is so compact that water does not penetrate it.

Of those who used well-water many contracted fever with the symptoms above

given, while of those who brought water from the tanks not a single case came under my observation.

One year ago water works were put in, the supply being from artesian wells 1,000 feet deep and cased so as to exclude all surface water. Up to the present not a single case of fever has been developed that could be traced to this water. On the other hand there are some families who from choice, or on account of living in outside districts of the town still use surface well-water. Among these the fever has been very common.

In August, 1891, a fire occurred in a stone building that contained 100 tons of baled hay. Fifty gallons of water per minute was thrown into this building for a period of twenty-four hours, and not a drop ran off on the surface.

Two days afterward a couple of wells 700 yards east, one 200 yards south and two west, 300 and 400 yards respectively, were found so strongly impregnated with the taste of burnt hay that the water for several weeks was totally unfit for use.

The description of the surface wells in McGregor is a description of the surface wells throughout this country where numbers of cases of fever have occurred.

I would give some illustrative cases, but this paper is already too long. Before proceeding further I wish to state distinctly that I have seen fevers continue from three to fourteen days due to malaria, or errors of diet, etc., but these lack the distinctive abdominal lesions above given. The fevers I have observed never terminate under eighteen to twenty-one days, and often longer. Now for the differentiation: Typhoid fever is nearly always derived from impure water, especially that contaminated by human dejecta. The same is true of "continued fever." Typhoid fever is marked in the majority of cases by certain abdominal peculiarities—, tympanitis and tenderness in right iliac fossa, "tub-shaped," loose bowels occurring after the administration of a purge or coming on of its own accord, sometimes constipation throughout the disease. "Continued fever;" acts the same way. In typhoid fever hæmorrhages from the bowels sometimes occur. The same may be said of "continued fever."

A papular eruption occurs in typhoid fever in a certain proportion of cases. It is sometimes present in "continued fever." Other causes than the presence of the typhoid bacillus are necessary to determine infection, therefore every one who is exposed does not contract the disease.

"Slow fever" requires the same secondary causes, therefore only one or two cases may occur in a family.

Typhoid fever sometimes drifts into the typhoid condition, which is thus graphically described by Tweedie: "It is announced by the decline of the previous more acute symptoms, by the pulse becoming more rapid and soft; the tongue dry, brown and tremulous and protruded with difficulty; by the incrustation of the teeth with sordes; by the increasing intellectual disorder indicated by the constant low muttering delirium and the greater insensibility and deafness; and by the condition of the muscular system which is evinced by muscular tremor and subsultus tendinum and in some cases by irregularity or intermission of the pulse; by the patient lying sunk on his back, or sliding to the foot of the bed, the muscles being unable to support the body even in the horizontal posture." "Continued fever" may drift into the typhoid condition with all of its attendant symptoms.

I think it is unnecessary to pursue this comparison any further, "things equal to the same thing are equal to each other," therefore, "continued fever" as it occurs in Texas is typhoid fever. It is there that in a great many instances it is very mild, much more so than we have been taught to expect in typhoid fever, but is not the abundance of pure air and the lack of concentration or virulence of the poison sufficient to account for it!

Until the pathology of "continued fever" is shown to be different from that of typhoid fever, or in fact until its advocates advance some pathology for it, I think it would be well to call it typhoid fever, or better, enteric fever, which would be a better name for both.

TREATMENT

The treatment of typhoid fever requires more watchfulness and diligence on the part of the physician and a stricter compliance with instructions on the part of the patient and nurse, than almost any other disease.

Nothing is more important than a definite understanding with both patient and attendants early in this disease.

To get the best results the physician's instructions should be faithfully carried out.

When a diagnosis of typhoid fever is made the patient should be put to bed and required to remain there until he is clear of fever during the whole day.

Strict cleanliness and thorough ventilation of the sick chamber should be insisted upon. This will necessitate frequent changes and airing of bed linen.

The next and one of the most important things to be done is to regulate the diet, or rather prescribe a diet. Only liquid food should be allowed under any circumstances. Sweet milk mixed with lime water to prevent coagulation, chicken water, beef essence, beef tea or a soft boiled egg, are often well tolerated, and serve the purpose admirably well, but I think nothing is so good and generally acceptable to fever patients as fresh cold buttermilk. It is impossible to prescribe the exact amount of milk that should be given; this must be determined in each individual case. Some patients will take from four to six glasses of milk during twenty-four hours while others are unable to take more than one or two without discomfort.

The alvine discharges indicate very clearly if too much is taken by containing undigested lumps.

In the application of medicine we should ever bear in mind that we are dealing with a self limited fever; one that under the most favorable conditions will continue from eighteen to twenty-one days.

We should also remember that it is not out of the natural order for the temperature to rise during the afternoon and evening and that unless it reaches 103° no active measures should be resorted to, to lower it.

Another point worthy to be remembered is that antipyretics administered during the afternoon and early evening may not have the same effect as when given during the latter part of the evening or early morning. Doses sufficient to make only a slight impression upon the fever when it is rising being sufficient, to often, produce perspiration and prostration if given near the time when the fever naturally, starts down.

After feeding, the regulation of temperature is next in importance. Antipyrine, Acetenalid, Phenacetin, Antikamnia and other similar preparations often do good service in this direction, but they should be carefully watched lest the depression produced counterbalance the good. In many cases cold water is all that is needed to regulate the temperature. Sponging the body with cold water, using the wet pack, putting patient in a cold bath or a graduated bath, are perfectly safe. For a bath nothing answers the purpose better than an ordinary cot, with a piece of rubber cloth spread over it. The patient wrapped in sheet, placed on this cot and water poured on until the temperature is sufficiently reduced.

After reducing the temperature with water, quinine in daily doses ranging from twenty to forty grains is often sufficient to keep the temperature within the normal bounds.

Quinine cannot be given indiscriminately in this fever. Some cases will not tolerate it, and if its use is persisted in will produce most disastrous effects. I have found where patients tolerate quinine it is best given during the morning hours, the daily amount being given in three or four doses.

Turpentine stupes over the abdomen when there is pain and tympanitis, are very comfortable to the patient and useful. Mineral acids, though very much used a few years ago, are rarely prescribed now, as they are found to do very little good except as a solvent for quinine.

Some recent discoveries, however, in regard to the gastric juice in febrile conditions, will justify the use of one of them. Gluzinski has found in a patient whose temperature was not above 102°, total absence of hydrochloric acid and not until the temperature reached the normal was there a trace of this constituent of the gastric juice.

There is always a diminution and often total suppression of hydrochloric acid in the gastric juice in febrile conditions. It is further asserted that the dyspeptic condition in fevers is due to the absence of this acid. This suggests the propriety of administering it combined with milk, as has been done in summer complaint.

Whenever the patient begins to show weakness whiskey or brandy should be given judiciously every 3 or 4 hours.

I think the advice given by many authors to wait until the two sounds of the heart can't be distinguished from each other before exhibiting stimulants, is erroneous.

This condition of weakness may be avoided by the timely administration of whiskey.

It is important to regulate the bowels; if they do not act give a mild purge; if this acts too freely use tr. opii, or tr. opii and bismuth. Often twenty or thirty drops of tr. opii given per rectum will control the bowel much better than if given per mouth.

Sleep is a very important factor in the treatment of typhoid fever. It has been said if a typhoid fever patient spends three successive nights without sleep, recovery is extremely doubtful. Chloral and pot. bromide are sometimes beneficial in the way of securing sleep, but I have found them rather weakening and unsatisfactory in many cases.

Tr. opium or sulph. morphia I think far preferable.

The specific treatment of typhoid fever has never given general satisfaction. Dr. Gustavius Eliot, of New Haven, Conn., in a recent article published in the *New York Medical Journal*, extols the German calomel treatment followed by tr. iodine and carbolic acid, as suggested by Bartholow. My experience with calomel has been very unsatisfactory. I have observed that in patients who take very much calomel during the early stage of fever, precisely the time it is recommended to be taken, hæmorrhages from the bowel are more apt to occur.

I have just dismissed two patients who took. of their own accord, large doses of calomel. One had rather an alarming hæmorrhage from the bowel followed by prostration and a tedious recovery; the other had an alarming hæmorrhage followed by death two days afterward.

Tincture iodine and carbolic acid, listerine, zymocide and other drugs of the same class may be useful in correcting the fetor of the discharges, and thereby lessening the intensity of the inflammation.

The internal administration of turpentine when the tongue is tender, is often followed by the most gratifying effects.

When the symptoms indicating hæmorrhage occur, ergotine hypodermically, and tr. opium administered by mouth, pushed to the limits of safety, are most useful. The propriety of applying cold to the abdomen, on account of the prostration and lowered temperature is extremely doubtful.

Perforation should not deter the physician from further efforts to save his patient because cases of recovery have been recorded by persons whose skill as diagnosticians can not be questioned. Here opium is the sheet anchor, because if sufficiently pushed it will keep the diseased bowel as effectually immobile as if it were placed in a splint.

Laparotomy has its advocates and no doubt lives may be saved by it, especially since suturing the bowel has reached such a degree of perfection that sections of it may be taken out.

This paper is not intended to be a full exposition of the symptoms, pathological changes, differential diagnosis, and treatment of this fever, but an effort has been made to present as briefly as is consistent with clearness, the more salient features of each.

A chapter on propylaxis might be written, but as it does not come within the scope of this paper and as it is already too long, a repetition and partial endorsement of the language of some one, I cannot now recall whom, will end this paper:

"Typhoid fever should be considered a disgrace to our modern civilization."

PARAPLEGIA OF SYPHILITIC ORIGIN.

Dr. Boulloch gives statistics to show that in sixty-two per cent. of cases the paraplegia shows itself during the first four years following the chancre. In eight instances it occurred in the first year. Retarded myelitis, that is coming on long after the chancre, either in the midst of tertiary accidents, or after a long period of inactivity, is of very rare occurrence. Figures show that medullary affections seem to burst forth twice as frequently in those who have had no mercurial treatment or only an insufficient treatment, as in patients who have been well cared for. Chronic myelitis is rarely fatal, but is also rarely cured. It appears as though paraplegias accompanied by severe pains are benefited more by mercury than the other, perhaps because of the existence of a gummous or sclero-gummous meningitis. Acute paraplegias, of precocious nature and rapid march, do not get well. Improvement is frequent in the tardy forms.—*Journal de Médecine.*

Communications.

WOUNDS OF THE BRAIN AND THEIR RESULTS.

By FRANK P. NORBURY, M. D.,
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Wounds of the brain are worthy of our greatest consideration.—The diagnosis of the extent and location is difficult when the wound is without the motor areas. Extra-cranial symptoms do not indicate the extent of brain injury. It is often impossible to differentiate the form of brain wound.

Clinically wounds of the brain may be classed as follows: *contused*, *lacerated*, *penetrating* and *complicated*.

Contused wounds may be followed by shock only, and the symptoms of concussion are then pronounced. The severity of a contused wound is measured by results, if destruction of brain substance (red softening) follows, nutritive interference has ensued. Such changes are usually confined to cortex, but interior areas and nuclei of brain may be bruised by severe forces.

Secondary consequences of contused wounds are manifested in insanity and other neuroses. Insanity may immediately follow concussion or, at a period remote, mental changes, progressive and chronic, essentially degenerative, may develop. Clinical study of 2,600 cases seen by me shows traumatism so be a factor in the causation of insanity of greater import than that usually ascribed to it. The forms of traumatic insanity are illustrated in the three following cases, viz: Case I. S. S., age 64, farmer; insane two months; cause concussion of the brain; mental derangement immediately followed brain injury; hallucinations of sight for a time; delusions of persecution; carried money on his person to prevent its confiscation. No motor disturbance; slight anæsthesia right side, impaired hearing. Improved rapidly under treatment, made good recovery. Case II. G. E., age 18; laborer; insane one year. Cause a blow on the head. Incoherence followed the regaining of consciousness after the injury. Neurasthenia rapidly developed. He was treated for typhoid fever; the mental symptoms —hallucinations and delusions of persecution—were present from the beginning of the neurasthenia. When admitted was more or less somnolent, stupid, incoherent and very feeble. Four months elapsed before evidence of mental improvement was noticed. Gradually improved and recovered after seven months' stay in the hospital. Case III. J. W. Z., age 36; carpenter: Insane three weeks on admission. Cause unknown. Four years before had fallen from a scaffold striking on his head, causing depressed fracture left parietal bone. Nothing was done surgically: One year after injury a change in disposition was noticed and gradually he was turned against home and friends. He left home and soon after other changes were noticed. Intense headaches, insomnia, etc., developed and finally delusions of persecution and some hallucination. He gradually lost his hearing. When admitted showed unmistakable evidence of organic disease of the brain. Motor symptoms marked also sensory changes. The disease was so far advanced as to make prognosis as regards life very unfavorable: he died within a year of organic disease of the brain—*pseudo-paresis*.

Lacerated wounds are associated with contused wounds and always when concussion exists. Hemorrhages are frequent in lacerated wounds, the clots cause paralysis: hemiplegia when whole motor area is involved—monoplegia when one single locality, as in motor aphasia when Broca's convolution is affected. Idiocy is the prominent result of lacerated wounds of the brain, fully one third of all idiocy is due to traumatism. The meningeal hemorrhage resulting during parturition from protracted pressure or instrumental interference. is responsible for nutritive interferences to the brain, atrophy results and may be accompanied by convulsions, spastic contractions, athetosis, etc. An examination of the brains of idiots or imbeciles whose mental derangement is due to traumatic brain lesions, shows in most all cases conclusive evidences that atrophy, sclerosis, etc., were due to nutritive changes, induced by the brain injury.

Porencephalus is undoubtedly due to traumatism occurring during parturition or to injuries occurring later during infancy. Wounds of the brain during infancy are of more serious import than is usually supposed; a statistical study of the results

would be a sad revelation to careless parents. Inflammatory changes are common in infancy and the result is atrophy and sclerosis with attending mental, motor and sensory changes.

Penetrating wounds of the brain are of serious nature; the degree depending on the location and on the substance penetrating. Antiseptic treatment of such wounds has done much to save life. Gunshot wounds of brain are most fatal, because of great destruction to brain substance.

Complicated wounds of brain are the most common. They include all the foreign classes and in addition have fracture of the skull associated, hence the term complicated. Indications of treatment are to relieve hemorrhage, pressure symptoms, and make wound aseptic. Base may be fractured; if so have sense interval, and on this base diagnosis.

Results of complicated wounds may be all those given in other classes and in addition suppuration, meningitis, brain abscess, epilepsy, aphasia, paralysis and general disturbances of sensation; antiseptic precautions lessen liability to suppurative meningitis. Brain abscess never occurs unless there is solution of the continuity of the surface. Every traumatic abscess is preceded by a wound which communicates with the surface in some way.

Traumatic epilepsy has some focal point of irritation due to pressure or nutritive interferance with cortical areas. It may be relieved by relief of pressure, either by elevation of depressed bone or by removal of clots of blood on the surface of the brain. Relief must be given early if good is to come from it. Delayed operation is never productive of permanent relief. Early operation is advised. In children we must operate on first appearance of convulsions, ere sclerosis is too far advanced.

EPILEPSY.

In a severe case, after failure of other remedies, Dr. J. A. Proctor, of Union City, Ind., resorted to the following combination (*Med. Bull.*) Under its influence attacks ceased and have not recurred more for than two years:

℞ Sodii boratis.....
Ex. spigeliæ fl.....
Tinct. calumbæ.....
Ex. stargrass fl.....
Tinct. sanguinariæ ....āā..ʒ ij.
Ex. pulsatillæ fl.....ʒ j.
Aquæ, q. s. ad .....Oj.
M. Sig.—Teaspoonful three times a day.

Society Reports.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Meeting of October 6th, 1892.

The President, Dr. W. H. H. Githens, in the chair.

Dr. William J. Taylor related a case of "Twin Pregnancy Complicated by a large Myoma in the Right Broad Ligament—Abdominal Section and Removal of Three Tumors—Abortion—Recovery."

Two years ago he had exhibited to this society three tumors which he had removed by abdominal section—a large myoma from the broad ligament, and two smaller subperitoneal ones from the posterior and upper surface of the uterus. The case had, at that time, elicited much adverse criticism and he thought the subsequent history of the patient might prove of interest. The patient had always been healthy; had worked on a farm in Ireland, often doing the work of a man. When first seen by Dr. Taylor, there had been absence of menstruation for five months. There was constant nausea and vomiting, the tongue was dry and somewhat coated. The pulse was rapid, 120 per minute, and very weak. There was diarrhœa which had lasted for several days. The urine contained albumen. She complained of great pain in the abdomen, especially on the right side. The bladder was very irritable. There had been no bleeding or discharge from the uterus. The breasts showed well marked signs of pregnancy and contained milk. The abdomen was enlarged and in the right iliac region was a mass about the size of a small cocoanut, which was hard, fixed and painful. This tumor had been growing very rapidly and was becoming more painful every day.

The diagnosis was obscure and Dr. Taylor was in doubt whether it was an extra-uterine pregnancy or a rapid growing myoma. At the section, two large tumors presented which were joined below but were separate above. The tumor to the left was the pregnant uterus while to the right was the new growth. The great mass of the tumor was between the layers of the broad ligament—a true intra-ligamentous myoma. This was enucleated from its

capsule and removed. There were two sub-peritoneal myomata, about an inch and half in diameter, which were also removed, one from the upper and one from the posterior surface of the uterus. Several small myomata, dotted here and there over the surface of the uterus, were allowed to remain. The patient reacted well from the operation, which was one of great difficulty and consumed much time, especially in the arrest of hemorrhage.

She did well until the sixth day when she began to show signs of aborting and suffered great pain in the region of the wound especially. For this reason and in the fear that persistent aud active uterine contraction might do serious damage, and as the os uteri was widely dilated and a foot of a fetus presented, active interference was decided upon. A fetus of a little over four months' development, along with its membranes and placenta, was removed and it was thought that the uterus had been emptied—the manipulation being of necessity very limited for fear of doing damage to the wound. On the eighth day, she was delivered spontaneously of a second fetus, which was alive and lived for an hour. Up to this, her attendents had no suspicion of a twin pregnancy. Except for an attack of phlegmasia dolens, her recovery was satisfactory. Some time after leaving the hospital she suffered from persistent diarrhœa which exhausted her greatly and refused to yield to treatment, finally ceaseing spontaneously.

Fourteen months after the operation she was delivered of a fine boy, now alive. Dr. Taylor did not attend her in the labor but learned from her that she was in labor about sixteen hours and that she had intense pain. The perineum was badly lacerated. Again she became pregnant and was delivered of a healthy girl. She now comes to Dr. Taylor suffering with a torn cervix and badly torn perineum with an almost complete prolapse of the uterus. The abdominal scar is in perfect condition and there is no evidence of trouble at that point.

DISCUSSION.

Dr. B. C. Hirst said that he considered the case remarkable for two reasons. The hemorrhage was extremely alarming from its profuseness and from its situation. In the second place he thought the abortion due to the death of the fetus and not to the operation. If it had been due to the operation, it would have occurred sooner. He was glad to see the course that was pursued and that the procedure was justified by the subsequent history of the case.

Dr. M. Price made a few remarks on the subject of "Emergency Cases in Abdominal Surgery" and presented the following cases:

1. RETENTION OF URINE.

The patient was seventy-nine years old and suffering from retention of urine due to an enlarged prostate. He had been unable to pass urine freely for a long time and for several months it had been constantly dribbling. It was impossible to pass a catheter. The Hunter Maguire operation of supra-pubic cystotomy was performed, the bladder freely washed out and stitched to the abdominal wall, a rubber drain having been introduced with a gauze drain above and below it. Patient passed urine freely through the rubber drain; all drainage discontinued after the sixth day. Hunter Maguire's aluminium plug was used to keep the opening into the bladder patulous. The prostate was as large as a double fist. Patient recovered.

2. TUMOR OF RIGHT TUBE.

Patient twenty-eight years old, suffering from a small tumor of the right tube, the left being densely adherent and cirrhotic, not larger than a lima bean. She had been an invalid for six years; one year and a half under the rest treatment; electricity by a celebrated gynecologist. Patient made an excellent recovery.

3. REMOVAL OF OLD PUS-TUBE.

The patient, a colored woman, twenty-six years old, had contracted gonorrhœa from her husband at the time of marriage, but had recovered so far as vaginal discharge is concerned. She had been unable to work for a long time, owing to frequent attacks of pelvic trouble, and was a confirmed invalid. The tumor extended above the umbilicus, rather to the left of the median line, and contained pus, blood and a watery fluid. There had unquestionably been a rupture of an old pus-tube and a violent general peritonitis. Two-thirds of the pus sac was enucleated and

tied off. It was impossible to remove the other third as the adhesions were stronger than the sac itself, and it was adherent directly over the iliac vessels. Thorough irrigation and gauze and glass drainage; recovery.

4. ECTOPIC PREGNANCY.

Patient thirty-six years old, suffering from terrific hemorrhage from a ruptured ectopic pregnancy. She was pulseless at the time Dr. Price saw her, ghastly pale, respiration sighing, sick stomach, with a feeling of something in the bowel, constant diarrhœa, distended abdomen, normal temperature. As soon as the abdomen was opened, blood poured from the incision. The ruptured tube was delivered and tied off. At least a pint of clot was removed from the pelvis; quantities of liquid blood also discharged. Thorough irrigation and glass drainage for six days; free purging and liquid diet after the second day. The patient rallied from her hemorrhage very slowly but made a perfect recovery.

5. RUPTURED DERMOID OF THE RIGHT SIDE.

Patient had been suffering from the tumor for five years and had had repeated attacks of peritonitis. During the very hot weather the tumor ruptured and from that time on she suffered from peritonitis; the bowels at the time of operation, September 3rd, being covered with inflammatory lymph and looking very much as if parboiled. A number of pitchers of water were used for irrigation and a glass drainage tube inserted. She made an uninterrupted recovery.

The water used in these cases was plain boiled water, cooled down by other not boiled and seemed to get rid of microbes so far as could be judged by the effect on the patients and their recovery.

6. PYOSALPINX AND OVARIAN ABSCESS.

A pyosalpinx and ovarian abscess of the right side, resulting from gonorrhœal infection at the time of marriage, had been removed from this patient. At the time of operation the left side appeared healthy, but the principal reason for leaving it was the already almost hopeless condition of the patient. Drainage was continued for four days and was followed by a fistulous track through which the patient menstruated regularly and which persisted for seven months in spite of efforts to close it. At the end of seven months it ceased discharging and her physician found her to be pregnant. Owing to indiscretions in lifting, she miscarried but recovered nicely from this and in the latter part of 1891 again became pregnant and was delivered of a healthy girl.

Dr. Price stated that this was the third case of undoubted gonorrhœal tubal troubles where one side was left. One had to be operated on the second time. This one now reported and the third remained perfectly well.

7. TUMOR OF ABDOMEN COMPLICATING PREGNANCY.

The patient was thirty-one years old; always healthy. Four months after marriage she became pregnant but her abdomen enlarged much more quickly than a pregnancy of one or two months would account for. She was suffering from severe peritoneal pain and constantly increasing distension, with a large tumor on the right side extending up to the kidney. Her condition demanded immediate relief and a large fibroid was removed along with the pregnant uterus containing a dead fetus of about three months.

The specimen was of great interest and from the large growth, sarcoma rather than a pure fibroid was suspected. The walls of the uterus were thickened in all directions and from their unyielding character had caused the death of the fetus at this early date. Patient recovered without any complication.

8. TWO CASES OF APPENDICITIS—OPERATION.

The first patient was suffering with a well marked tumor in the right iliac fossa of ten days' formation. First attack of appendicitis. Persistent constipation for five days. Six to eight ounces of pus were discharged. Thorough irrigation; gauze packing. Recovery without any trouble.

The second patient had been suffering from mild attacks for fifteen years; never so severe as to completely incapacitate him for work. The last attack began with severe and agonizing pain in the region of the appendix. Hypodermic injections of morphia with free purgation were used for

a few days with seeming relief. His symptoms increased in severity and Dr. Price was called in consultation. At the operation, the intestines were found matted together and were separated with great difficulty. Six to eight ounces of black, offensive pus were evacuated; thorough irrigation of the peritoneum and abscess cavity, with gauze packing and a rubber drainage tube of large calibre in the abscess cavity and a gauze drain also of the peritoneal cavity. Complete recovery.

9. STRANGULATED DIRECT INGUINAL HERNIA.

The patient had been vomiting questionable matter for four days. The bowel was dark but not gangrenous, so it was freed and examined for bands of adhesions and washed with boiled water that had been cooled down to a proper temperature. Recovery was rapid.

Dr. Price also presented a paper on Hard Tumors of the Uterus. He said that many of these tumors are of varied and entirely different pathological appearance and would seem to have originated from different causes or conditions in fibroid changes. These tumors are of low vitality and prone to develop rapidly into malignant forms of disease.

Dr. Price stated that he had examined over one hundred of these hard tumors to ascertain the manner of their growth and development. In the true fibroma there is but a trace of muscular fibre and but little connective tissue and most of that in its capsule. The vascular supply is almost entirely in the capsule, with small vessels running into the tumor. As the tumor advances in size the vascularity of the capsule increases.

In the myomatous tumors the bloodvessels are very numerous throughout the tumor, tortuous, and of large caliber. The muscular element can be demonstrated without difficulty and the growth of the tumor is much more rapid, in comparison with the hard nodular variety, and is much more apt to be confounded with pregnancy. The myomatous variety is much more apt to be diffused, or one face of the uterus covered with the growth, with the uterine canal passing half round the tumor. Dr. Price had never seen a tumor that occupied the entire walls of the uterus. The nodular variety has its beginning, in most instances, in the muscular structure of the uterus and may travel in its growth either to the uterine cavity or in the direction of the peritoneal cavity: the latter being the most common, as that is the direction of least resistance. In either case they may become pedunculated. It is rare to see a true hard fibroid single: most of them are multiple, with one large nodule surrounded by a number of smaller ones.

DISCUSSION.

DR. WILLIAM J. TAYLOR asked if it would not have been possible to have removed a portion of the prostate, in the case of enlarged prostate, so as to give a passage through the urethra.

DR. PRICE replied that he could have removed the prostate, but that it was situated very deeply and he thought the patient could do better as he is.

DR. B. C. HIRST reported the following case of "A large Collection of Pus Between the Layers of the Broad Ligament Complicating Pregnancy." The patient was a middle aged woman in the fifth month of pregnancy, a number of years having elapsed since the last child. She had been confined to bed for about eleven weeks. A large tumor could be made out alongside the uterus and at the section a cystic tumor was found between the layers of the right broad ligament, containing about two quarts of pus, which was incised and the pus evacuated. The sac was sewed to the abdominal wall. The woman recovered. Dr. Hirst thought that it was likely that this was a suppurating intraligamentary cyst. He thought it remarkable as complicating pregnancy, and as an unusual termination of a monilocular broad ligament cyst, which usually contains a clear limpid fluid; not at all prone to septic changes.

DISCUSSION.

DR. CHARLES P. NOBLE said that this question of abscess under the peritoneum is an interesting one, but he thought that, unless Dr. Hirst is more definite in regard to the real nature of this abscess, it has not very much bearing on the question whether you have broad ligament abscesses or not. He thought the case did not come under the head of broad ligament abscess, but of suppurating broad ligament tumor. He had seen a number of broad

ligament abscesses but they had all been puerperal.

Dr. M. Price said, we have never denied that there may be abscess anywhere, in the broad ligament or between the folds of the peritoneum in any portion of the abdomen, but what we do deny is the frequency of these things and the ability of the operator, with his finger in the vagina, to say whether the mass is inside or outside the peritoneum. These collections can be drained outside of the peritoneum but what have you done? You have attempted to drain an abscess, with probably a necrotic tube, diseased appendix or some other condition inside, which will keep up the trouble for a long time, probably with a fistulous tract for months. The only proper treatment is to go into the peritoneal cavity and remove the diseased condition that has produced this abscess; let it be exterior or interior to the peritoneum. Eighty or ninety per cent. of all pelvic troubles have been in the start intraperitoneal and have been taken care of by nature and at the time of operation are found extra-peritoneal, having been shut off from the general peritoneal cavity by inflammatory adhesions. There are cases of puerpural trouble where, from laceration of the cervix, an abscess has formed in the cellular structures around the cervix, but these abscesses are exceeding rare, so rare that a man scarcely sees one of them, while the other condition is common.

Dr. Joseph Price said that this paper opens up some points of dispute in regard to pathology, natural history and surgery and he should like to make a few remarks in regard to his own personal experience. He was not willing to accept the literature on this subject of intra-ligamentary cyst. The reported cases are all on record in doubt, as the one this evening. The reporter is still in doubt as to the character of the tumor—he thinks it contained pus. We know that parovarian cysts contain a clear fluid which is the least likely to change. It is the purest form of liquid which we remove from the pelvis. He had never known a parovarian cyst to suppurate. It was his impression that in the case reported, the enucleation would have been easy. He was not willing to say that the patient was well. The time will probably come when it will be necessary to repeat the procedure and remove the tumor. He had yet the first case of intra-ligamentary or broad ligament cyst to see.

He had removed many ovarian abscessess and pus accumulations and after removing them, he could hold up the remains of the broad ligament to the light and demonstrate clearly that there is not the semblance of suppuration in the cellular tissue at that point. He knew that abscesses occur at all points where we find cellular tissue, but, in the vast majority of cases, pelvic abscesses are due to traumatism or to extension. They occur in the cellular tissue precisely as in the ovary. Ovarian abscesses in 99 out of 100 cases follow a suppurating tube. There is an attachment of the pavilion-end of the tube to the ovary through which infection takes place and abscess develops. It is folly to take the position that these things are primary and that they do occur in the broad ligament so frequently without cause.

Dr. Barton C. Hirst in closing the discussion, remarked that the usual contents of broad ligament cysts being so pure, he had been surprised to find an abscess in that situation.

Dr. J. M. Baldy reported a case of chronic abscess due to appendicitis. The patient had been sent to him for an opinion in regard to a rapidly growing tumor that had first been noticed two years previously as a small protrusion from the external inguinal ring on the right side. A truss had been applied under the impression that it was a hernia. When seen by Dr. Baldy the growth was the size of a fetal head and had much the appearance of a sarcoma. At the section, a quart or more of pus escaped and the abscess cavity was found situated between the skin and muscles, with an opening at its lower end which communicated with the head of the cæcum, dipping down behind the muscles at their attachment to the iliac bone. The cavity was carefully irrigated and two drainage tubes were placed—one extending behind the muscles into the abdominal cavity, the other in that portion of the cyst between the muscles and the skin. Recovery was slow but good. On careful inquiry after recovery, the following history was elicited. She had had some three or four years previously an attack of inflammation in the region of the tumor, which lasted for several weeks and gradually left her. She had thought nothing

more of it and had not connected the so-called hernia with it. The original attack was undoubtedly an appendicitis and the pus cavity had existed in a quiescent state for years.

Dr. Baldy also reported a case of malignant peritoneal cyst and stated that he had called the tumor by this name as he did not know how else to call it, never before having seen or heard of such a condition. Before operation he had considered the tumor a par-ovarian cyst, free from adhesions. The uterus and ovaries could be palpated and were free from disease. At the operation the cyst was found densely adherent to the abdominal walls and the point of division was found with difficulty—the sensation imparted being that of passing through connective tissue. In attempting to break through the adhesions at the upper margin of the tumor, the finger slipped and entered the cyst itself, emptying it of a gallon or more of dark, flaky fluid. The interior of the cyst cavity was lined with a soft, velvety, membrane, studded all over with either tubercular or malignant nodules. The posterior wall seemed made up of coils of intestine, covered with this velvety membrane. The ovaries had both undergone cystic degeneration. To the side of both ovaries, and apparently growing from them, were papillomatous masses. The tubes were shortened and thickened, the fimbriated ends both perfect, but short and stumpy; and the uterus quite large and heavy. The whole pelvic cavity formed part of the cyst cavity, the bladder bulging into it in front.

A drainage tube was placed in each flank, between the cyst wall and the abdominal wall; and a third one inside the cyst, to the bottom of the pelvis. The patient's recovery was slow but satisfactory. She still has a sinus into the pelvis, which dicharges a variable amount of thin fluid from time to time.

Dr. Baldy stated that the only explanation he had been able to make of the case was, that there was a congenital anomalous distribution of the peritoneum, which, later is life, took on malignant changes.

DISCUSSION.

Dr. Joseph Price said that this was not the proper society to discuss the subject of appendicitis, as the men are not here who cure these by palliative measures, opium and rest. These men tell us of the cases that they have treated in this way, following the opium by a little calomel or a little rochelle salts and the patients have done fairly well. On inquiry we learn that other eases, treated by them in the same way, have not done so well, and that after continuing the treatment for several days, they have finally called in a surgeon when the patient was in a dying condition. These patients often carry these abscesses for several years, travelling from one part of the country to another in search of relief, having as many as twenty-four attacks, and the case goes on record by twelve physicians, each curing two attacks. He has presented specimens here, removed in the fourth, fifth or sixth atteck, that some one else was reporting as a recovery under palliative treatment. Not a week passed this summer without a case of appendicitis. All of them had been neglected, all had had a number of attacks treated by so-called medicinal or palliative treatment without the slightest relief.

Dr. George E. Shoemaker said that, while it is difficult to criticise a case that one has not seen, it seems reasonable to suppose that the so-called peritoneal cyst reported by Dr. Baldy, was a case of tuberculosis of the peritoneum which had caused adhesion of the bowels to each other and a large accumulation of fluid between the parietal and visceral peritoneum and that the parietal peritoneum was largely thickened and that this had been stripped from the abdominal wall, as Dr. Baldy himself thought. The peritoneum in these cases does become greatly thickened. Some of his own cases suggested this view.

Dr. Harris A. Slocum suggested that a possible explanation of Dr. Baldy's case of peritoneal cyst is congenital enlargement of the urachus. He could understand how such a condition might occur—first enlargement, and then malignant change. Under such circumstances there would be found marked adhesion in the middle line.

Dr. Joseph Price said that tubercular peritonitis often simulates cystoma. It was his impression that this was a case of tubercular peritonitis.

Dr. J. M. Baldy said that it had always been his custom to open chronic abscesses. In the vast majority of cases the appendix is already destroyed. He

could have gained nothing by opening the general peritoneal cavity.

In regard to the second case he was rather inclined to regard it as malignant and not tubercular. The ovary was undoubtedly malignant, and it seems right to assume that the rest of the disease was also of a malignant nature.

Dr. Joseph Price presented specimens of extra-uterine pregnancy. These specimens are of interest, he said, and there were a few points about them that he would like to discuss. In the first place as to position; he thought they are primarily all tubal. In looking over the literature of the subject, he finds that there is a disposition among prominent operators to drop down from the position they once held in regard to intra-ligamentary or broad ligament rupture As yet Dr. Price had the first *broad ligament* hæmatocele or extra-uterine pregnancy to meet, and this with an experience of eighty-two cases. Rupture takes place at all points of the tube except at the crest of the ligament, which he believed to be the strongest portion. The pavilion extremity is the most common seat of rupture.

In these cases death is a matter of hæmorrhage and shock. The escape of a pint of blood into the peritoneum will sometimes kill, while a hæmorrhage of a quart from the vagina or uterus will not kill. The peritoneal cavity will not tolerate this blood. It is something aside from the mere loss of blood that kills. The danger from hæmorrhage is the chief danger. Until this summer, suppuration had not occurred so often in his experience. The last three cases, in which there was pre-existing tubal and ovarian disease, had suppurated. He was satisfied that there was an advanced form of tubal disease, which favors tubal pregnancy and also favors suppuration of the placenta and fetus after rupture. The quiescent cases that suppurate and come through the bladder and bowel are unfortunate cases. In many there is a fecal fistula.

The child free in the abdomen is quite a common occurrence. In Jessop's case there was a live child free in the abdomen. Three or four such cases have been reported. Dr. Price thought there was a case of Dr. Atlee's in which a child weighing nine pounds was found among the intestines.

Elliston J. Morris,
Sect'y.

THE SURGICAL SOCIETY, OF LOUISVILLE.

Stated Meeting, Sept. 12th, 1892.

The President, Dr. A. M. Cartledge, in the Chair.

SYPHILITIC CASES.

Dr. I. N. Bloom: I simply want to exhibit this patient to illustrate a point that has been very much misunderstood; at least the syphilid has been called by various names. There seems to have been a great deal of confusion between the forms of syphilis known as serpiginous and tuberculous. There is really no such thing as a tuberculous syphilide. The term is applied to a form, rarely met with, a type of which is shown in Kaposi's atlas. This patient gives the history of syphilitic trouble of three or four years standing.

The infiltration all around the orifice of the anus and perineum is that of condylomata lata.

No. 2. This little colored girl came to me on the second day of August last, and I made diagnosis immediately after seeing the lesion on the cheek; it has since been confirmed. When she consulted me there was this induration which you see on the cheek, and a few enlarged glands on the neck, nothing else. I made a diagnosis of syphilis from the initial lesion on the cheek. She gave the history that some time before she had a fight with another colored woman and was bitten on the cheek. I gave her powdered chalk, bread pills and other things to hold her, continuing this treatment for three weeks, when the eruption appeared on her body, making the diagnosis absolutely certain. She was not put upon specific treatment until after the eruption appeared. The date of her altercation preceded the appearance of the local lesion about four weeks, or two months before I saw her. It would be an interesting case if we could make an examination of the woman who bit the girl, I doubt not we would find decided evidences of buccal syphilide. We made every effort, but could not find her assailant. This is the first chancre that I have ever seen on the cheek, but they have been reported not infrequently. There is still considerable enlargement of the glands of the neck, but the induration of the cheek has grown less and less since she

first commenced specific treatment, a little less than a month ago. There has been no enlargement of the glands in the groin.

It seems to me this is a perfectly clear case of syphilitic lesion; girl, eighteen years of age, otherwise seemingly in excellent health; does not claim to have been virtuous, but as far as she knows, has not been exposed to any disease through coitus. There appears, some time after a bite, a sore on her cheek, which is a painless, indurated, non-ulcerative enlargement, and, in addition to this, a very great induration of the glands of the neck. I am consulted two months after she was bitten, and, in three weeks send her to the hospital, at which time the enlargement of the glands and the syphilide on the cheek were twice as large as they are at the present time. The glands on the neck were enormous, so large that you could see them as far as you could distinguish her features, on both sides of the neck, but larger on the side on which the chancre appears on the cheek. Before being sent to the hospital, she came to see me every two or three days, and I was constantly watching for an outbreak upon the body. I attended her at the hospital. I told her that such a breaking out would occur eventually, and it did occur. It was followed by scabby sores on the head and condylomata upon the genitals, both larger labia being involved. This condition of things led me to put her upon specific treatment, which has caused a disappearance of the indurated condition to a great extent. The history, it would seem to me, excludes anything else but syphilis, and makes it as a clear a case as is possible, without confrontation.

DISCUSSION.

Dr. J. G. Cecil: I cannot but agree with Dr. Bloom in his diagnosis of this case; I think, according to his statements, there can be no reasonable doubt about it. I should be very much pleased if we could get hold of the other party in the case.

Dr. E. R. Palmer: I really do not know that I have anything to say regarding the case: (Second case exhibited by Dr. Bloom). The condition of the local sore now is absolutely negative. In the local sore I cannot conceive any feature of syphilis, either early or late so far as any initial lesion is concerned, but the woman is undoubtedly syphilitic. I see so few colored people, and of course they are often seen by Dr. Bloom in his hospital service. The condition of the glandular enlargement is such that this alone would not justify anything in the diagnosis of syphilis. Except for my entire confidence in Dr. Bloom's ability to make a diagnosis, I would not be prepared to say that the scar on the cheek was a chancre, but I recognize the extreme possibility of the occurrence of chancre anywhere, where the infection might be applied, and, in view of the history of the case, I think there is no reasonable doubt but that this is the initial lesion. The mastoid glands are not enlarged on either side as far as I can determine now. In fact, the case is a little too far along to make any positive diagnosis, except on the history. Dr. Bloom's history of the case, I think, makes it perfectly clear that the initial lesion occurred at that point, (on the cheek), but I must say that in the sore, as I see it now, there is no physical evidence of its being a chancre. We all know the tendency to strumous trouble in colored people, and their liability to symmetrical adenitis. While this patient has shown secondary manifestations for three months, and been under treatment, no Doctor has the right to say that it is or is not syphilis, just from the case as it presents to-day. I think the day is not far distant when syphilis will be taken from the class known as venereal diseases.

Dr. I. N. Bloom: I think it all points to infection of recent date.

Dr. E. R. Palmer: It is unquestionably infection of recent date. I think I can quote Dr. Bloom when I say that it is exceedingly hard to find a vaginal initial lesion. Dr. Bloom has shown me one or two cases of local vaginal lesion, and Dr. Bullock brought in a case some time ago with a chancre on the labium minus. It is exceedingly hard to find the local lesion in the female.

Dr. I. N. Bloom: I want to indorse what Dr. Palmer has said, that in the woman you often find evidences of recent syphilis where there is no evidence of the initial lesion. As a case in point, I will mention a girl whose history I knew very well, knew also that she had not led a virtuous life. A man had been sent to me suffering from iritis; he had been treated but received no benefit; he denied absolutely having had a sore of any kind. Upon examination (he having come

directly from the oculist), I found a few scabs in the hair; found syphilide on his body; found a mucus patch in the corner of his lip; he had this iritis and a universal glandular enlargement. He told me that he had had no intercourse with any woman, except one, since Easter day. In my absence, my assistant examined the girl, and found absolutely nothing. Not knowing who the girl was and feeling as I suppose all doctors do, that they are not thoroughly satisfied unless they make an examination themselves, I requested this man to bring the girl to my office that I might make a personal examination. This was done and much to my surprise I found it was the girl above referred to, whom I knew very well. I made a thorough examination and could find no trace of syphilis of any kind whatever. The man had no chancre as far as I knew, but he had unmistakable evidences of syphilis. I do not know where the syphilitic virus entered, but there was no doubt as to the presence of syphilis. Another case I recall came to me with diagnosis of cancer of the tongue, and yielded promptly to six months' mixed treatment; that is, all traces of it disappeared. In this case there was absolutely no history of chancre, but it was unquestionable syphilis.

Dr. Anderson will remember a case that I sent to him on one occasion, a young man; I made the diagnosis, yet I know it was syphilitic trouble. The man died of typhoid fever about six months after Dr. Anderson saw him. I do not doubt that there are many men who are perfectly honest in saying that they have never had a sore, yet, there are unmistakable evidences of their having syphilis. In women I believe that more chancres are overlooked than discovered.

In the second case reported by me, I think the sore is a typical induration and can only be attributable to one cause, syphilis. I think a chance can be of the Hunterian type on the cheek as well as on the penis. Concerning the enlarged glands of the neck—we would naturally expect a greater enlargement on the side on which the chancre is situated. Glandular enlargement is produced through the lymphatic system, and I believe, if Dr. Palmer will think a moment, he will remember a case we saw together having a severe chancre on the penis on one side, and the enlargement in the groin on that side was very much out of proportion, very much larger, than the glandular enlargement on the other side of the groin. Referring again to the case under discussion, I do not see what the sore on the cheek could be except chancre; I would have nothing else to suggest. I do not see what could produce that form of induration which is left. Taking the case just as it appears now without any history, without any syphilide on the body, without any history of the effect of the mercurial treatment, simply the sore on the cheek and the glandular enlargement, I think the suggestion would be initial lesion. It does not look like eczema or any form of furuncle, or, in fact, anything except chancre; there has never been any sensitiveness or evidence of pain on pressure. The simple existence of these two conditions—the enlargement of the glands, and induration on the cheek I think suggest syphilis. I agree with Dr. Palmer that the day is probably not far distant when syphilis will be taken out of the class known as exclusively venereal diseases.

Dr. A. M. Cartledge: I believe this is a case of syphilis with the initial lesion on the cheek. However, I do not know whether I would have been inclined to consider it syphilitic trouble, had not Dr. Bloom given us the history in detail.

Fibroid Tumor.

Dr. Turner Anderson: I present here a sub-mucous fibroid tumor removed from a woman thirty-four years of age, who had been in the care of an irregular practitioner who made diagnosis of pregnancy; the patient was a widow and about as far above suspicion as possible. Upon examination I found this tumor which was removed without great difficulty, promptly relieving the case. The tumor was found beneath the mucous membrane and was without a pedicle. I secured it with a pair of forceps, pulling it down as low as possible, separating the adhesions with my finger, believing this to be the safest way. There was continuous hæmorrhage for several weeks before I saw the patient, none afterward.

Traumatic Aneurism of Cheek.

Dr. W. O. Roberts: At the annual

meeting of the Medico-Chirurgical Society during the spring, Dr. Anderson exhibited a patient (little girl) suffering from traumatic aneurism of the cheek. The history of the case was about as follows: When the child was seven years old she was struck on the cheek with a stick, a swelling immediately raised and never disappeared. At the time the patient was exhibited which was seven years after receipt of the injury, those of you who saw the case will remember the strong pulsation of the tumor, and the thinness of the tissues superficial to it. Compression of the anterior temporal artery would cut off pulsation of the tumor. It was advised by the surgeons present at the meeting that an early operation should be performed, otherwise the tumor would increase in size, and eventually the skin would give way. I saw the case with Dr. Anderson last Thursday at the St. Mary and Elizabeth Hospital; found the growth had considerably increased in size, there was also a dilated condition of the smaller vessels on the surface extending some distance beyond the tumor itself. The skin the growth was very thin and bluish in appearance. An operation was performed at once, Dr. Butler administering the chloroform, Drs. Anderson and Bullock assisting. I made a long incision directly over the central portion of the tumor and carefully dissected it out. I think there were eight vessels ligated; hæmorrhage very slight, and the patient has done uninterruptedly well since the operation.

SPECIMENS.

Dr. W. C. Dugan: I have three specimens to exhibit: No. 1. Sarcoma of the kidney, removed on the 16th of last month at the Children's Hospital A day or two before the operation the patient was brought in from the country by Dr. Durrett for some obscure abdominal troubles, and upon examination we found in the side a large tumor extending under the costal cartilage and into the pelvis. Diagnosis of cancer of the kidney was made, and operation advised at once. Drs. Cartledge and Vance saw the patient and both agreed not only as to the diagnosis, but also as to the advisability of immediate operation. Operation was performed on August 16th, Drs. Vance and Cartledge assisting. I made an incision extending from the eighth rib down over Poupart's ligament, removing the tumor and a portion of the surrounding tissue, after ligating the pedicle; there was practically no hæmorrhage and no drainage tube was used; patient on the table about sixteen minutes. The patient was troubled at the time of operation with malarial fever, temperature 100.2° F., pulse 126 when she was put upon the table. I believe we made a mistake in operation on this patient when we did, and if I had it to do over again, I would put her on treatment for malarial fever for a number of days before submitting her to operation. After the operation her temperature went up to 103° and pulse to 166; however, she has done fairly well since, leaving the hospital on the twentieth day. Since her return home she has gained flesh and strength and is able to run and play as other children.

Specimen No. 2—This specimen is one of especial interest; it is the entire appendix, and I call particular attention to the shape of it, it was just as you see it when removed. The patient, I regret to say, died. On the 16th day of August I was called down near Jellico to see a young man suffering from what was supposed to be intussusception. I reached him on the 18th after forty miles jaunt over the mountains. I found the patient with pulse 110, very bad expression of the face, etc. Immediate operation was advised. He realized his condition as he had been vomiting fecal matter since the Sunday previous. It seems on the 11th of the month which was Thursday, he had a severe pain in the left side, which he attributed to having eaten a watermelon the day before. On Friday he was some better and able to sit up, but suffered pain and took an opiate. On Friday night a physician was called who made diagnosis of intussception; vomiting was excessive and he had no movement of the bowels whatsoever. He continued to grow worse and on Sunday he had stercoraceous vomiting; then one of his physicians came to town for me and I went out with him. Drs. Glass and Dailey, of Boonville, had charge of the case, and ably assisted me in the operation. I opened the abdomen and passing my finger down to the cæcal region, this specimen was brought up, there being no adhesions at all; it looked very much like a large leech, and you can all see the resemblance. There was no hæmor-

rhage at all, and caecal attachment very small and shows that it has been made small by being twisted. The young man was in such condition as to require very rapid operation, so he was off the table and in bed in a very few minutes. Now, the pathology of this is especially interesting:—You will (the appendix being cut open) notice here a large clot of blood; he had ulceration of the appendix, opening into one of the large blood vessels, which resulted in a hæmorrhage into the lumen of the appendix, ballooning it as it were, and he had this peculiarly developed appendix, which finally became twisted causing obstruction and gangrene. This shows how little is required to cause complete intestinal obstruction, as in this case there was nothing else, yet there was complete obstruction which was relieved by its removal. I left him in about two hours, seeming to be doing well, but there was still a very bad expression about the face. He had two large fecal evacuations that evening and night, and cessation of vomiting, but died the next day at ten o'clock in collapse.

Specimen No. 3—Next is an appendix removed from a patient who was under the care of Dr. F. C. Wilson. Dr. Wilson had made the diagnosis of appendicitis. There was no doubt about its being a case of appendicitis, as you will observe here an enterolith en situ. I was asked to see the case one week ago ago last Saturday by Dr. Wilson, and, upon examination, we found an induration in the right cæcal region. At the time the patient's pulse ranged from 95 to 100, temperature practically normal. Now, we considered this one of the "border line" cases, and advised the little fellow to be left without operation until the next morning, provided the symptoms did not change for the worse, when we would see him again. He was given that night ten drops of the tincture of opium, which gave him a good night's rest. The next morning he felt well, but on examination the tumor in the cæcal region was still marked, so we decided to delay operation no longer. There was little or no rise of temperature in this case at any time. I want to say that the doctor in this case had suspected cystitis at first, and had treated him for this condition, but upon examination, the urine was found to be perfectly normal. The patient was put upon the table and an incision made from middle of Poupart's ligament toward the anterior spinous process, hoping to find the pus or abscess extra-peritoneal. Doctor Kirk assisted in the operation; the peritoneum was separated from the iliac fossa which being opened and finding no pus the peritoneum which was much congested and rather protruded into the wound was opened, and to our surprise found a great deal of pus.

The patient had general suppurative peritonitis, there were a great many patches of lymph of a dirty gray color on the cecum, and the whole peritoneum presenting that peculiar dirty-gray appearance which we so often find in suppurative peritonitis. The cavity was thoroughly washed with hot water, and then the right cæcal region loosely tamponed with iodoform gauze. The operation lasted about twenty to twenty-five minutes. He was taken off the table in good condition apparently, having lost nothing by the operation; he remained so all that day, and had a very fair night up to twelve o'clock when there was considerable distension of the bowels. I saw him again at five o'clock at which time there was decided tympany. We introduced a tube into the stomach and relieved him of much gas and tried rectal injection of turpentine emulsion, salts and water etc., but septic paresis was profound and he grew rapidly worse, while the discharge from the wound was perfectly sweet. Patient died about six o'clock. The bowels were enormously distended, and we were unable to get anything through his stomach at all.

In the two cases reported, one had decided tympany, the other case no tympany at all. This makes eight cases of appendicitis I have had in the last two months, four of which have been fatal, making the mortality fifty per cent.

If an individual experience is to be relied on on, I am justified in coming to the following conclusions: First. The symptoms of appendicitis are variable and misleading, often times simulating cystitis, intussusception, internal strangulation, etc.

Second. The localized pain, "McBurney Point," is often absent. I am convinced that that symptom has been dangerously magnified. Many regard it as almost pathognomonic, and when not found, cases of appendicitis are left to the mercy of

accident and allowed to drift beyond the safety line before counsel is called.

Third. The sudden onset of an attack of severe colic, in the young, which does not yield in a few hours to medicinal agents should excite strong suspicion of appendicitis, and cause the physician to call to his assistance a surgeon and thereafter see the case together as often as it be considered necessary.

Fourth. I desire to place myself on record as most decidedly opposing the position of Drs. Loomis, Draper and Delifield in maintaining that these cases are medical, and should be under the absolute control of the physician, he saying when the surgeon is to operate.

Fifth. The first duty of the attending physician when he suspects appendicitis is to call a surgeon, for if he waits for the "beginning of sepsis or shock," or signs of perforation, etc., etc., he had almost as well not call him at all. If the physician waits until he considers an operation necessary, oftentimes he has delayed too long, and, too, it is always desirable that the surgeon become somewhat acquainted with his patient's temperament, etc., before the operation.

Sixth. The presence or absence of temperature is of little or no insignificance. It is not unusual to find large accumulations of pus with sub-normal temperature in these cases—a fact not generally appreciated. If every case of appendicitis, catarrhal or suppurative, were subjected to early radical operation, fewer deaths, by far, would result than under the present method of so-called conservative treatment. No stronger argument could be produced in favor of early operation than our inability to examine an abdomen and say what condition exists within, and the high rate of mortality in these cases, if left to medical treatment alone. Some of the most severe cases, to judge from the subjective symptoms, prove to be nothing more than an intensely congested appendix, whereas, some of the mild, "compartively" safe and "comfortable" cases, were found to be diffuse, suppurative peritonitis, with perforation; therefore, I maintain that since we are unable to diagnose the condition, and since exploratory operation under favorable surroundings, and in skilled hands, is not dangerous, I desire to enter a plea for early operation.

SPECIMENS.

Dr. W. L. Rodman: The specimens you see here are several enlarged glands that I removed from the left inguinal region of a man about thirty years of age, a few days ago. The enlargement of these glands followed an attack of gonorrhœa: they were easily dissected out, and I did it almost entirely with my finger. The wound was thoroughly washed with 1 to 500 chloride of zinc solution, the patient being up and around the hospital in three or four days. There was not a drop of pus. I consider extirpation decidedly the best plan of treatment for these enlarged glands, and have been doing the operation for several years, with excellent results.

No. 2.—Here are two sections of veins, each of them taken from patients suffering from varicocele. The bloody one was removed to-day, and was the most extensive varicocele that I have ever seen. I brought the ends of the veins together by means of a continuous buried suture, finally closing the wound, also with continued suture, without drainage. There was not a drop of pus, and I think the result will be all that could possibly be hoped for.

Dr. H. H. Grant: What do you want to bring the ends of the veins together for?

Dr. W. L. Rodman: For the purpose of holding the testicle up.

TETANUS DUE TO PUNCTURE WITH A HYPODERMIC NEEDLE.

An instructive case is reported in a recent number of the *British Medical Journal*. A patient who had been in the habit of injecting morphine hypodermically into himself came under observation with symptoms of tetanus which eventually resulted in death. A careful search revealed no other cause for the tetanus than a small inflamed and suppurating place near the shoulder, which had been caused by one of the hypodermic injections he had given himself. The lesson taught by this case of the importance of the observance of scrupulous cleanliness, even in so small an operation as a hypodermic injection, cannot be too strongly impressed, and the memory of the disastrous effects which may result from the neglect of proper precautions should be firmly fixed in the mind of every practitioner.—*Omaha Clinic.*

Translations.*

By M. B. WERNER, M. D.

Death ending from Acute Mercurial Poisoning, due to the Local Application of the Grey Salve (*Berlin. Klin. Woch.*, 1892).—Jan. 15. Female, æt. 20, suffering from cracks in hands and pain in the forearm, was advised to use the salve. One hour after its local application nausea, faintness, and vomiting set in. Admitted on the same evening to the hospital at Breslau; vomiting continued, repeated fainting attacks, hand and lower third of forearm swollen, doubtful fluctuation; incision shows cellulitis. Jan. 16. Vomiting continues; albuminuria, tenismus; evening temp. 36.6°. Jan. 17. Bloody stools, colic, anuria; temp. 36.2°. Jan. 18. Hæmatemesis; continous bloody stools. Jan. 19. Gangrenous gingivitis; anuria continues. Jan. 20. Death. Section the lower portion of the small intestine—hemorrhagic spots; superficial necrosis of the mucus membrane; the large intestine showed the grave picture of dysentery; kidneys showed necrosis of epithelium. The cause given for this grave train of symptoms, following only one application, is that it was applied on the broken surface.

Albuminuria during Pregnancy Treated by Internal Administration of Chloroform.—Duff (*Med. Neuigk.*, Sept. 17, 1892) reports the satisfactory results in five cases of marked albuminuria accompanied with convulsions. He gave in solution 0.8 gr. every hour; the convulsions ceased in a few hours and the secretion of urine increased. All were able to go to the end of their term, and in all the albuminuria disappeared after parturition.

Ballay and Lerefait (*Med. Neuigk.*, Aug. 1892) have treated whooping cough for months with creosote with surprising good results. In thirty cases Lerefait asserts that the most grave cases lasted never longer than six weeks, and usually only one or two weeks. Its first effect is to arrest the vomiting, and the number of attacks of coughing are reduced from sixteen and eighteen to three and four daily. It is given in syrup:

℞ Creosote..... 0.50
Syrup .....100.

M. S.—Two to three teaspoonfuls in children six weeks to two months, six to eight teaspoonfuls as they are older.

Ballay adds wine to the mixture.

Treatment of Tuberculosis of the Lungs by Antiseptic Inhalations.—Delthil (*Med. Neuigk.*, Sept. 24, 1892) reported before the Academie de Medicin his method, by which he claims a marked improvement and prolongation of life:

℞ Ol. terebinth.....350.0
Ol. lavandul.....100.0
Iodoform..... 10.0
Sulph. ether .... 20.0 M.

This mixture, impregnated with the air breathed, will reduce the quantity of tubercle bacilli, and even changes their appearance under the microscope from their normal comma to olive-shaped in the space of five to ten days.

GONORRHŒAL VULVO-VAGINITIS IN YOUNG GIRLS.

Epstein (*Abst. in Centralblatt f. Chirurgie*, 26, '92) has observed gonorrhœal vulvo-vaginitis in newly born infants, in whom it should be distinguished from the discharge produced by the desquamation from the vagina, which occurs in the first few days after birth. This latter sometimes has the appearance of pus, but the microscope shows it to be made up of epithelial cells. Through neglect of cleanliness, however, this desquamative catarrh can lead to a real purulent, though non-specific vaginitis. The gonorrhœal infection of the genitals of baby girls probably occurs in the same way as that of the eyes, namely, during the passage of the child through the cervix and the vagina. Epstein believes that this occurs more frequently than is commonly supposed, and that a part, at least, of the cases of gonorrhœal vaginitis in somewhat older girls are the result of an overlooked and neglected infection at birth. [For the difficulty in tracing the origin of these infections in young girls we can vouch from personal experience, and for some of them Epstein's theory may hold; in general, however, the precocious small boy and hired-man theories seem more plausible.] Epstein makes the reasonable suggestion that with gonorrhœal mothers, care should be taken to prevent infection of the infant's vulva as well as the eyes.—*Omaha Clinic.*

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*Translated for Medical and Surgical Reporter.

Bacteriological Notes.*

Etiology and Treatment of Tetanus :—In the *Transactions of the International Medical Congress, 1891,* Sig. Sormani presents some very interesting facts concerning the distribution of the tetanus bacilli and the effect produced upon their virulence in passing through the intestinal tract of animals. The tetanus bacillus exist in the upper layers of the soil, especially where it has been manured or infected. By rolling on the ground and subsequently licking their bodies, dogs and other animals introduce the bacilli into their alimentary canal and later deposit them again in the feces. The very interesting statement is made that the virulence of the bacteria becomes diminished in the gastric juices and afterwards resume their virulence in the intestine. If animals are withheld from any exposure to fresh infection, their feces will remain virulent for a considerable time. Rabbits have been infected with tetanus from the feces of dogs that had been confined for sixteen days. Tetanus bacilli invading the respiratory tract do not infect unless they are able to penetrate the tissues. Most cases of this disease have been acquired by wounds becoming infected by manured earth. As tetanus bacilli are extremely resistant to the ordinary disinfecting solutions, and are only destroyed with rapidity by iodoform and an acidulated solution of corrosive sublimate, the treatment should be to scrape the wound and after washing thoroughly with the antiseptic solution sprinkle it with iodoform. Although the article contains little not heretofore known, it is suggestive in the direction of prophylaxis.

A Gas-producing Bacillus (*Bacillus aero gener capsulatus Nov. Spec.*) capable of rapid development in the blood vessels after death :—Welch and Nuttall (*Bulletin of Johns Hopkins Hospital,* VIII, 1892, p. 81) describe a bacillus which they found in the blood of a man who died in the hospital in Oct. 1891. This bacillus is of considerable interest as it multiplies in the blood very rapidly (after death) and produces a large quantity of gas. It thus explains the cause of the occasional appearance of gas in the blood-vessels after death which could not be satisfactorily attributed to post-mortem decomposition. Coverglass preparations made from heart's blood and properly stained showed a large number of bacilli; from three to five micromillimeters in length and about the thickness of anthrax bacilli, with ends slightly rounded but sometimes almost square cut. The bacillus is not motile; capsules were sometimes observed about the bacteria. The bacillus grew on all of the ordinary culture media. It grew best at a temperature of 35° to 37° C. It is anærobic. No growth took place in plain or sugar agar without first removing the oxygen. It forms no spores; the vitality of the cultures was of variable duration. It was destroyed in bouillon cultures heated to 58° C. for ten minutes. From inoculation experiments on rabbits the authors do not consider this bacillus as pathogenic for healthy rabbits under ordinary conditions. Rabbits were inoculated with certain quantities of a bouillon culture in the ear vein, killed after from two to five minutes and placed in an incubator. In the short space of six hours after death gas and bacilli had developed, the latter in enormous numbers.

Preserving the Malaria Parasite Alive.—Rosenbach (*Berlin klin. Wochenschrift, No. 35, 1891*) calls attention to the fact that the plasmodia which produces malarial fever can be preserved in the living condition in the blood extracted by leeches. In a case of typical tertiary ague the author placed a leech over the spleen. It died in 48 hours and within it numerous dead plasmodia were found. Two other leeches were applied some hours before the beginning of the attack, one of these was opened in 24 hours and found to contain a very large quantity of red blood corpuscles, a large portion of which included living plasmodia and mobile pigment. The other leech was opened in 48 hours. It presented a similar condition. A leech applied 24 hours after the treatment with quinine was found to contain a few shrunken organisms. From these facts the author suggests that human blood rendered artificially coagulable by each subtraction might be used for a cultivative medium for malaria parasites.

Sporeless Anthrax.—In 1873 it was demonstrated that anthrax bacilli culti-

* Translated for The Medical and Surgical Reporter.

vated in bouillon containing 1–2000 of bichromate of potash lost their faculty of producing spores. Their virulence, however, was not changed. Roux (*Annal. l' Institute Pasteur 1890, p. 25.*) has more recently produced a similar condition by the use of carbolic acid. His experiment briefly stated is as follows: ten test tubes containing bouillon to which carbolic acid had been added in variable quantities from 0.02 to 0.20 per cent. After sterilization they were inoculated with anthrax and placed in an incubator. The tube containing the greatest quantity of the acid remained clear, that containing the least developed bacilli with spores while those containing the intermediate quantity of carbolic acid developed sporeless anthrax bacilli.

The result of this experiment is important in illustrating the physiological and morphological aberrations in certain bacteria. It points still further to the effect that may be produced upon ordinary intestinal bacteria when their environment is changed either by medicines or an inflammation of the intestinal mucosa. It also indicates that changes in the environment of bacteria may endow them with characters, morphological and otherwise, which will separate them from the standard by which they are recognized.

EPILEPSY MISTAKEN FOR URÆMIC CONVULSIONS.

After reporting two cases of epilepsy with albuminuria, mistaken for uræmic convulsions, Dr. James Tyson says: (*Medical News,*) that so far as any peculiarity of the convulsions themselves is concerned, there is no way of avoiding errors. The uræmic are in fact typical epileptic convulsions exhibiting the same varieties and degrees. But true uræmic convulsions do not repeat themselves at intervals of months or years at a time, and yet leave the patient apparently no worse for his experience. And if true epileptic convulsions happened to be accompanied by albuminuria, such albuminuria does not as a rule remain at a standstill, or grow gradually less, but increases, and is associated after a time with other phenomena of chronic Bright's disease, such as hypertrophy of left ventricle, œdema, and high vascular tension.

Abstracts.

DENTITION IN INFANTS.

Upon the questions of difficult dentition and gum lancing, the medical world has been for some years divided; the smaller party taking the modern view that dentition is a normal process and rarely if ever produces dangerous symptoms; the larger party holding that dentition is responsible for most of the ills that infants suffer from, and that gum lancing is its sovereign remedy.

It is undeniable that at the period in life when dentition is in progress, the infant is subject to certain disorders which occur much more commonly than at any other period of life.

We think it can be said, however, without fear of contradiction, that there is not a single positive observation which has ever been recorded to prove that dentition produces general or reflex symptoms.

If it could be shown that dentition was the only peculiar condition of the infant, then its causative influence would be clear. But dentition is not the only peculiarity and coexisting phenomena can only be classed as coincident. The most profound characteristic of infancy is that it is the period of most rapid growth and development of all organs; and careful observation of infants reveals numerous and great deviations from the normal growth and development in many instances. It will probably not be denied that such deviations are found most commonly in infants who have been artificially fed. In infants improperly fed, and this term is too extensive to attempt to define here, reflex manifestations are very readily produced, and it is not improbable that even a normally developing tooth may, in such an infant, be the exciting cause of trouble. We have seen infants, who would invariably have a bronchial attack immediately before the proruption of a tooth, but they have invariably been infants who were suffering from demonstrable deviations from normal nutrition. We have further found that after improving the nutrition of these infants, the further progress of dentition was unaccompanied by symptoms.

In such cases while it would be just as well perhaps to recognize the possible influence of dentition, its subordinate impor-

tance should be kept clearly in view. The great danger of teething is in the diagnosis, for when this is once made the important underlying conditions are apt to be neglected, and permitted to progress to the death of the child.

Dentition is a convenient scapegoat, and Olliver has well said: "During the nearly ten years that I have been connected with the Hospital for Sick Children, it has often happened that children brought to me for diseases of this type (teething) have been found to be suffering with an altogether different affection. It is very easy to invoke this diagnosis, but by passing in review the different organs and apparatuses, the diagnosis can easily be rectified."

But if dentition cannot be shown to be the great etiological factor of infantile disorders, it does not follow that gum lancing should be abandoned. It is difficult to overlook the numerous instances in which careful observers have thought they have obtained good results from its use, but it would be well also to bear in mind the many cases in which it has failed. As a therapeutic procedure it may have some value, but the indications for its use must be sought elsewhere than in a supposititious condition of teething. We should like to offer the following conclusions:

1. Before the diagnosis of "teething" is made, there should first be carefully excluded, organic diseases of all organs, infection, intoxication, and perversion of nutrition.

2. Gum lancing as a therapeutic measure should stand on its own merits, and be studied apart from any supposititious and undemonstrable process of teething.—*Journal Amer. Med. Ass'n.*

ICHTHYOL IN DISEASES OF WOMEN.

Drs. Reitman and Schönauer experimented with ichthyol in acute and chronic inflammatory diseases of the uterus and its appendages, and are quite satisfied with its efficaciousness. They tried it with success in parametritis, pelveoperitonitis, oöphoritis, salpingitis, periöphoritis, perisalpingitis, as well as retrouterine and periuterine exudates, chronic metritis and cervical erosions. The following formula was used:

℞ Ammon. sulpho-ichtholy.....5 jiss.
Glycerin.....f ʒ iij.
Sig.—For external application.

—*Zeitschrift fur Therapie,* No. 18, 1890.

THE TREATMENT OF ALCOHOLISM BY DRUGS.

The *British Medical Journal* makes some excellent points in noticing a recent work upon this subject by Dr. J. E. Usher, of Melbourne. No one drug is regarded as a specific. Each case must be studied by itself, and such measures adopted as are especially adapted for its peculiarities. The author regards it of the first importance that the patient have a real desire to be cured. No treatment can succeed without the existence of this desire; hence the first thing must always be the strengthening of such will-power as the patient may possess. Harshness, threats, and abstraction of sympathy are all out of place in such cases. Dr. Usher for four or five days gives nux vomica; at night he gives bromide of potassium or some other sedative, if needed for sleeplessness. He thinks that the best hypnotic is hyoscine, given hypodermatically in doses ranging from one one-hundred and-fiftieth of a grain upwards. If absolutely necessary, one ounce daily of whiskey or brandy may be given. After the fifth day a mixture of manganese and strychnia is indicated for two or three weeks. Iron is given when a tonic is called for. Euonymin with pepsin is found needful when hepatic symptoms are prominent.

The nitrate of strychnia is used hypodermatically by many close observers. With it is combined, sometimes, atropine. Often a mixture of tinctures of cinchona and iron appeases the appetite for drink.

In general, the first object sought is the breaking of the vicious habit; and, second the neutralizing of the immediate ill effects which may follow the dropping of the accustomed stimulus. The first end can be obtained only by a determined effort of the patient's own will. Drugs may be of service here in making him so sick that he cannot enjoy the use of alcohol: in doing this care must be taken that drugs be not used which endanger the patient's health or life The use of strychnia as a substitute for the alcoholic stimulant to which the nervous system has become accustomed, has a rational basis. The use of morphine, cocaine, etc., may be beneficial under certain circumstances, but is fraught with the danger that a new habit may be formed worse than alcoholism.

The *Journal*, however, relies not so much upon drugs as upon the diffusion of knowledge, well directed legislation, and improvement of the lives of the people so that they may not crave drink to overcome the discomforts of bad digestion and the worries and anxieties of daily life.

CASE OF HYDRAMNION IN TWIN PREGNANCY.

Dr. Everett J. Brown, in *North American Practitioner*, Sept., 1892, records a case of a patient æt. 34, mother of two children, youngest seven years of age.

Physical examination revealed an enormous abdomen, œdema of feet and hands, body temperature 102° F.

Vaginal examination revealed the cervix completely dilated, the finger coming in contact with a very tense bag of water. The membranes were ruptured, and was followed by an astonishing gush of water. He estimated, that at least eight quarts was passed; the relief to patient was immediate. Regular labor pains began, and were soon followed by the birth of two fœtuses, weighing two and three pounds. There was only one placenta, both children were females and were probably unioval twins. The puerperium was uneventful, the patient being up in nine days.

All œdema of extremities disappeared.

TWENTY-FIVE CASES OF EXTIRPATION OF THE UTERUS FOR CANCER.—A CONSIDERATION OF ULTIMATE RESULTS.

Dr. Charles A. L. Reed, of Cincinnati, presented to the recent meeting of the American Association of Obstetricians and Gynecologists, a report of twenty-five cases of complete vaginal extirpation of the womb for cancer with only too primary deaths—one from shock and one from iodoform poisoning. Of the twenty-five operated upon, but fourteen were of more than two years standing, and hence were all that could be discussed with reference to their ultimate results. These fourteen were divided into two classes, of seven each viz., those in which the disease had existed for more than six months before the operation and those in which it had existed for less than six months before the operation. Of the first class, i. e., those of more than six months (an average of 10 months) previous duration, all were dead; of the second class, i. e., those of less than six months (an average of 4 months) previous duration, only on had since died. One of the recoveriese is of more than five years duration. The conclusion from these figures is that the cases of cancer of the uterus ought to be remanded for operation as soon as diagnosed. Dr. Reed looks upon total extirpation as the only operation to be advised or practiced in these cases, the primary mortality from which, in experienced hands, varies from five to eight per cent.

SOME PRACTICAL POINTS IN THERAPEUTICS.*

By JNO. A. LARRABE, M. D.,
LOUISVILLE, KY.

The author, in conclusion, made mention of those therapeutic agents which, during the summer months, had been so successful, in his hands. In entero-colitic diarrhœa—the so called "summer complaint" of cities, dependent upon the various micro-organisms, vitiated air, and bad food—salol, napthaline, carbolic acid calomel, in minute doses, and nitrate of silver stood the test.

In gastro-enteritis, he found salicylate of bismuth useful and in inflammatory diarrhœas of infants and older children Rochelle and Epsom salts, in acid infusion of roses with small doses of laudanum. In chronic cases, the nitrous acid camphor mixt. (Hope's) did not fail. For gastric fevers so common in children the preparations, ammonia-phenique, and sulpho-phenique, were used with better success than any other treatment.

He also used this treatment very satisfactorily in the exanthemata.

In diphtheria, peroxide of hydrogen and whiskey internally gave him the best results. Disappointment in the use of the peroxide, is often due to the poor quality of the drug. It is a very unstable article. It should always be purchased in small amounts protected from the light, by being put up in 4oz bottles. On coming in

*Abstract of a paper read before the Louisville Medico-Chirurgical Society.

contact with the false membrane of the throat, a white foamy reaction takes place. It should be freely applied to the throat on mops or by use of spray. The crying and resistance of the child, favors the distribution of the fluid. In this way the author has treated successfully a great many cases of diphtheria. He believes that the symptomatic use of definite, although often toxical, doses of whiskey, in children even of tender age, to be the surest safe-guard against heart failure.

Selected Formulæ.

CORYZA, CEPHALALGIA AND ASTHMA.

Dr. Coupard (*Münchner med. Wochenschrift*, No. 12, 1892) recommends in asthma, coryza and cephalalgia the following powders:

℞
Cocaine hydrochlorate.....grs. ij.
Menthol.....grs. iv.
Boric acid.....grs. xxx.
Finely powdered roasted coffee.....grs. viij.

EXTEMPORANEOUS GLYCERIN SUPPOSITORIES.

M. Romer contributes the following to the *Pharmaceutische Post:*

℞
Anhydrous sodium carbonate..... 1 gm.
Stearin, rasped..... 2 "
Alcohol.....15 "
Glycerin, q. s. to make.....60 "

Mix the sodium carbonate and stearin, and pour the alcohol over them Heat the mixture in a water-bath until the alcohol is driven off, then add the glycerin and continue the heat until a limpid solution is obtained. Pour into molds. The quantity indicated is sufficient for four suppositories for adults.

THE TREATMENT OF SOFT GOITRE BY PARENCHYMATOUS INJECTIONS OF IODOFORM.

Prof. v. Mosetig-Moorhof (*Le Bulletin Médical*, No. 36, 1892) proposes parenchymatous injections of the two following solutions in the treatment of soft goitre:

℞
Iodoform.....1 gm.
Ether } āā .7 gms.
Olive oil }

℞
Iodoform.....1 gm.
Ether.....5 gms.
Olive oil.....9 gms.

The writer, however, has only used the former solution, and in sixteen cases treated by him (ten men and six women) the results were excellent. In two months the necks of all the patients had diminished six centimetres in circumference. Two months later this had attained eight or ten centimetres. The goitres did not regain their former volume even six months after cessation of the injections. A syringeful is injected into each goitre, and in one case of enormous goitre six grammes (1¾ drachms) were injected. This is repeated every four to six days; some of the patients received one each day for several days without any bad results. No disagreeable action was noticed.

CONTUSIONS OF THE SCALP.

Dr. F. F. Lawrence concludes as follows (Columbus *Med. Jour.*) on this subject:

1. Contusions of scalp caused by slight blows or falls, accompanied by moderate amount of effusion, are simple and require little treatment.

2. Contusious of scalp caused by sharp blows or severe falls are always to be examined carefully, and a guarded prognosis given.

3. Those accompanied by large effusions, and especially if pulsating, should be treated by shaving scalp, incising, turning out clots, (examining carefully the pericranium and skull), securing bleeding points, closing with sutures, preferably braided silk, dressed with dry antiseptic dressing, which should only be removed when absolutely necessary, before the fourth or fifth day, when sutures should be removed, a light compress bandage applied,

4. Those accompanied by little or no swelling, when caused by severe blows, should be carefully watched, and on first appearance of local fever or swelling, freely incised, washed out and treated as open wounds.

5. If the case is not seen until patient has had chills, hot dry skin, hard pulse, fever coated tongue, nausea or vomiting, insomnia, nevous twitchings, or any other symptoms of meningeal inflammation, we should cut down and trephine at onec over site of injury.

6. While inflammation of either pericranium or the meninges, is one of the things likely to follow these injuries, it may be prevented by early incision.

7. Where caries of bone or meninges occurs, the cause may generally be found to be injury of pericranium, which became inflamed, effusion followed, then inflammation of vessels from pressure, and then by extension meningitis.—*Med. Review.*

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THE MEDICAL AND SURGICAL REPORTER.

SATURDAY, OCTOBER 29TH, 1892.

THE TREATMENT OF COMPLICATED FRACTURES.

The treatment of complicated fractures as advocated by v. Volkmann, is, that every complicated fracture should be operated upon primarily, the operation consisting in enlarging the wounded space, enough to admit the finger to search for and remove all loose fragments of bone, blood and clot. Should the fractured ends of the bone be sharp, they should be cut, provision for drainage should then be made.

Dr. R. v. Frey believing this method rather extreme, concluded to make some studies upon the results of antiseptic conservative treatment.

In the Grazer clinic all suitable cases were treated by the Volkmann method, with the result of slow healing often marked shortening and pseudo-arthrosis. These placed along side of cases sent in by country practitioners, in which the wound had been freely dusted with iodoform and bandaged, and which—after three or four days presented an aseptic condition—naturally created some doubts regarding the propriety of Volkmann's treatment.

The treatment now used at the above clinic is as follows: In the absence of much contusion to the soft parts, the wound is cleansed and disinfected, then powdered with iodoform, and dressed with iodoform and sublimate gauze.

If injury to the soft parts has deprived them of their vitality, such are removed, the wound washed out with sublimate solution, and if necessary, provision made for drainage.

Incision is only resorted to when there is reason to believe that foreign bodies have entered the wound, or the fracture has perforated into an articulation, or if symptoms of local infection present themselves.

As a rule bone sutures are not used; when, however, it becomes necessary, use such. Metal wire or Gussenbauer's clamps are used.

The author gives a list of forty-six cases: thirty by conservative treatment, sixteen non-conservative or by incision.

Among the conservative cases, there was one death from tetanus, one from phlegma; the remaining twenty-eight were cured, eighteen first intention, and in ten cases there was some suppuration owing to presence of sequestra.

Debridement was performed in nine non-septic and seven septic cases (cases were septic on admission.) Of the nine non-septic all recovered, notwithstanding one suffered from erysipelas; of the remaining eight there were five with slight, and one with marked suppuration; two without any. Among the seven septic cases there were four deaths (three from sepsis and one from tetanus). The remainder

recovered, one after secondary amputation, the other after long continued sequestra formation.

Of the thirty cases conservatively treated twenty-five were perfectly healed; in two, bony defects prevented a solid union; one tetanus case, and one case that left the hospital too soon, will bear evidence why the results were unsatisfactory.

Of the 9 non-septic cases treated by debridement, one healed with pseudo-arthrosis, the remaining 8 entirely healed; of the 7 cases (septic) treated by debridement, 2 were perfectly healed, 4 died, and 1 had amputation performed.

It is interesting to note that the number of conservatively treated cases, show no greater percentage of wound infection than those in which incision, drainage, etc., had been used; further, that of these cases there was but one of pseudo-arthrosis, and only in one-third of this number was there suppuration; whereas, in those cases where debridement was used this took place in one-half the number. There is also less shortening noticed in conservatively treated cases. The author concludes, therefore, that in the treatment of complicated fractures of the extremities, the rule should be conservative treatment; and the exception, debridement; the latter to be used only in special indications.

The destructive antisepsis should be only used when urgently called for; but in most cases it can be replaced by the conservative form of antisepsis.

UTERINE FIBROIDS.

Humans defines uterine fibroids as aggregations of normal uterine tissues in abnormal situations and masses. He says that operations are rarely, necessary, and among the indications for operations are hemorrhage when it threatens life, when unbearable from weight, when they cause serious pain and interfere with the digestion or circulation, obstruction of bowels, or when the pedicle becomes twisted.—*Brooklyn Medical Journal.*

Book Reviews.

Physician's "Complete" Book of Records, edited and compiled by Samuel E. Walker, M D., Philadelphia. Comprising Daily Call List, Daily and Monthly Cash Accounts, Obstetrical Record, etc., etc. Complete in one volume, bound in three-quarter Russia. Price, $5.00. Keystone Publishing Co., Philadelphia.

No class of professional men lose as much money, through faulty bookkeeping, as physicians. The chief reason for this lies in the fact that nearly all account-books made for the use of physicians are either so complex as to be constantly neglected, or so subdivided into Call List, Cash Book, Ledger, etc., that a regular bookkeeper alone can keep up the postings. Probably not one practitioner in fifty keeps his accounts in such shape that he can tell any patient, at a moment's notice, exactly how his account stands. This is not because the accounts of an average physician are complicated or extensive, but is wholly due to the fact that, so far as we know, a simple and yet complete method has hitherto been unknown. There are a number of systems extant which possess many points of excellence, but nearly all fail to cover the ground completely.

The new method, presented by Dr. Walker, seems to meet all the requirements of the physician with an average practice, and, appears to merit its title, "Complete."

The great feature of Dr. Walker's book is the system of keeping the entire record of each patient for each month, on one line extending across two of the broad pages. The first entry is patient's name and address; then memoranda regarding case, and following this thirty-one columns for recording visits during month, conveniently divided into morning, afternoon and night. Continuing on opposite page is the cash account, providing for payments on each or any of the thirty-one days, total charges for month, total payments for month, balance due at end of month, and also for subsequent payments, and transfer to succeeding month, if this be necessary. The actual time required for keeping this account will probably be not more than ten seconds for each patient, of not more than ten minutes a day in the practice of the average physician. We can see two great advantages in this system, viz: the physi-

cians current practice is daily under his eye, and closely grouped, instead of being widely scattered through a large book, and therefore no one is likely to be "overlooked," and each and every entry, being an "original entry," will be accepted in evidence by any court in case of suit to recover. There is no "posting," and, from the nature of the case, each patient's account appears every day exactly as it stands, all in one place, and complete.

The Obstetrical Record is compact and comprehensive, meeting all requirements. The Record of Deaths and General Memoranda, together with the extensive double index, make up a volume that will give great satisfaction to the profession generally. The book is very substantially bound having the "patent back" device whereby each section is mounted on a linen guard, rendering the book practically indestructible. The low price is much in favor of the success of this new publication, which, we are sure, will meet with prompt recognition on its merits.

Correspondence.

AN EDUCATIONAL NEED.

Editor of MED. AND SURG. REPORTER:—Certain epochs have taken the lead in certain lines of progression—in greatly improving of literature and advancing particular sciences and arts nearer perfection. There are periods in which there is something more than natural or historical growth—where there are evidences of great leaps.

Medically and surgically we acknowledge our great debt to the genius of the generations that have preceded ours. We have no disposition to decry or quarrel with our inheritance. We cherish the lessons of many great problems solved for us. But from these problems new corollaries have been evolved to be worked out by our better light. Many of the old systems have had their day. With the advance of civilization, the increase of populations and the change of modes of life, new modifications are needed to meet new or better understood conditions. When we consider the progress that has been made—what generations have done—the problems mastered, the lessons learned, which we have no need of unlearning, we have reason for the hope that we can do better than has yet been done. We are not ready to accept as fact that the processess of development and evolution in the medical and surgical profession have been worked out—that our science and art have reached completeness. The gratifying truth is that there has never been a time in the history of the profession when there was more vigor and intellectual activity than now, a very flood tide of high effort swells the veins of the profession. The question present and urgent is what lines can we adopt to hurry along our advances. The majority of the active and strong brained practitioners of every section of our country, of cities, rural towns and districts spend some time each year at some of our centres of medical and surgical education endeavoring to enlarge their professional knowledge in the clinics of our public and private hospitals. The spirit of inquiry and research is widespread. Only the *diluted mediocrity* of the profession is content with what is known. The desire pervades nearly the entire profession to gain more and better knowledge, familiarity with the more simple and accurate methods. By some cooperation, some organized plan, of our college and hospital authorities and our widely known clinicians and teachers, our visitors of the general profession would find much to tempt them into our midst. It is not possible to measure the great benefits that would accrue to post-graduates, to the general practitioners who visit the city for the purpose of improving their knowledge in general or in some specific line of practice, if the wards of our general and private hospitals were thrown open to them and they could be given the benefit of the bedside lessons and clinical teaching of our eminent teachers. We will not attempt to sketch a plan or mark out lines to be pursued; we will leave that to more competent hands. From the fact that the carrying out of some such idea as we have suggested would be in the interest of the entire profession and certainly in the interest of our medical colleges, the matter should command the attention of the profession. The men who visit us are not dull, but bright and earnest men, who come with an earnest purpose, and the only way we can perfect some plan to give them general and hospitable welcome and aid in promoting their educational plans is to begin.

Some plan certainly is possible in a great city famed for hospitality, philanthropic and educational systems. If a distinct institution could be so organized as to best serve the purpose that could be established. The enterprise would also have a commercial as well as a professional value, and thence of interest to the general business public. Nor are the social features, the widening of the fellowships of the profession, to be left out of consideration. The encouragements, strength gained by professional association, and the great benefits growing out of comparison of methods and results are not appreciated to the extent they should be. The interested association which promotes intimate acquaintance, softens professional antagonism and does much to drive out those vulgar jealousies which detract from the dignity of the profession. Such an institution in all its appointments and in its general management could be so conducted as to furnish an excellent theatre where could be brought into fellowship men of high character, talents and good work, many of national repute, both as specialists and general practitioners; where could be discussed those diseases which lie peculiarly within the field of medicine and as well those which by their very nature are without its domain and which require surgical means of investigation and surgical treatment. And there could be taught valuable lessons of guidance for those thrown in the narrower lines of professional life. One of the very certain and patent tendencies of such an institution would be to improve the teaching in our schools and draw to them the best talent of the country. As a rule the sons of our eminent physicians and surgeons and their students enter the medical school where their preceptors received their best lessons, they go where they are directed. If we would make Philadelphia a great center of medical and surgical education we must look to the influence of the general practitioners of the country. We must convince them that it is here that the best work is done and the best lessons taught. Then this free educational institution, blending with its work home and professional hospitalities would become a feeder for our best medical colleges. It would not draw from the schools but put better material in them, would have the healthful effect of relegating to the museums for stuffed animals the dudes who would enter the profession, and put workers within their walls. It would be auxiliary to and contribute largely to elevate the standard of our organized system of medical education. Aside from its specific educational features, to such an institution there would be a home side appealing directly to home pride.

So manifold are the details of our medical science, so rich and varied its literature that the inviting and welcoming of general practitioners and specialists visiting our city into such an institution could not be otherwise than fruitful of much good. We would get the facts of many active and rich experiences, the history of new departures from old traditions and methods. Our period has impressed its characteristics upon our current medical literature; there is little of the ancient in its lines; it has in it the research, energy and noble genius of the living. With the old we are linked only by the tested truths of science and experience. Give to them who make our literature an arena in which they can discuss the results of their work. It is only those who *never knew much* who are *tired* of learning. There is a growing, vigorous life in the American physician and surgeon no matter what his location whether country side, barracks or prairie and he is willing to work hard and make many sacrifices to keep in the front rank of his profession. He has the good practical business sense to go where the best facilities are offered him to obtain what he feels that he needs.

Joseph Price, M. D.

Preston Retreat.

AMYL NITRITE FOR AFTER-PAINS.

I am satisfied that in many cases a nice warm meal is better than any medicine. Still, I have had several cases in which the pains were exhaustingly severe, and in which I was glad to turn to nitrite of amyl. This potent drug is a very efficient controller of after-pains, and, used cautiously, I see no reason to apprehend harm from it. A neat way to use it is to saturate a piece of tissue paper with five or six drops, stuff this into a two-drachm vial, and request the patient to draw the cork and inhale the odor when she feels the pain coming on. It acts with magical celerity.—*Dr. Winterburn, in Journal of Obstetrics.*

Periscope.

SURGERY.

FISTULA IN ANO.

As far as diagnosticating fistula in ano is concered, that is quite an easy matter, but to tell exactly the character of the fistula we have to deal with, is quite another thing, An operation that will cure one fistula will not cure another. Therefore, no general rule will apply to these cases. There are several things to be taken into consideration in properly diagnosticating or prognosticating a case of fistula.

1. Is it a simple fistula, and has it but one channel?

2. Is it a progressive or non-progressive fistula?

3. Is it due to any special diathesis, as tubercular, syphilitic, etc.?

4. Does it exist as a disease *per se,* or is it the result (secondary) of stricture?

These are essential considerations, aud will deside the method of operating and after-treatment, and the prognosis.

To illustrate: If the case is one of simple fistula with but one channel, a single di vision of tissue, either by the knife or ligature, will effect a cure.

If it is a progressive fistula with a great discharge of pus, and a rapid breaking down of tissue, an operation *by the knife* should be advised at once. If it is non-progressive, no hurry need be had, and the patient can adapt himself to circumstances.

If the disease is due to any special diathesis, snch diathesis must be ascertained in order that the proper medical as well as surgical treatment can be afforded. Indeed, upon this is decided the question whether an operation is warranted at all.

If the fistula be secondary to a stricture of the bowel, no operation is permissible until the strictured condition is righted.

I consider, therefore, that these are points of much more significance than to determine whether the fistula be an external, internal, or complete one. It has often occurred to me that the authorities put too great stress upon this division of fistulæ. It matters very little to the surgeon who is going to operate, which variety he is going to deal with, for he is going to do pretty much the same operation in all. It is the complications that concern him, not this kind of division.—*Dr. Joseph M. Mathews, in International Journal of Surgery.*

CEREBRAL SURGERY.

Hintzig (*Berliner klin. Wochenschrift,* 1892, No. 29, p. 713) has reported the case of a mason, twenty-nine years old, who, following a blow in the right frontal region, complained of pain at the site of the injury, with impairment of memory, defective intelligence, and attacks in which paresis of the left hand appeared, while the mouth was drawn to the left; speech and deglutition were likewise slightly affected. Subsequently, vision became impaired upon the right, and then upon the left. There had been no vomiting; and there was no alteration of the pulse. The head was bent strongly forward and slightly to the left; the left shoulder drooped somewhat. There was bilatereal papillitis and concentric limitation of the visual fields. The muscles of the right side of the face were paretic. The tongue was protruded a little to the right. There was also loss of power in the left upper extremity. There was weakness of the lower extremities, slightly the greater upon the left side. Sensibility was not deranged. The knee-jerks were exaggerated, the left side in greater degree than the right. Ankle-clonus was present upon the left, and the skin-reflexes were exaggerated. In the right temporal region, in a situation corresponding with the anterior half of the origin of the temporal muscles, was a doughy tumefaction, painful upon pressure. A diagnosis of a tumor of the bone exerting pressure upon the brain in the temporal region was made, and operative procedure decided upon. A large extent of bone was removed in the right temporo-parietal region, leaveing an opening in the skull of about 3½ by 4¼ inches. The bone in places was thin; in others, thickened. A large growth was found arising from the brain and penetrating the dura. The neoplasm was carefully removed. It weighed nearly nine ounces, and proved to be a mixed sarcoma. The patient recovered absolutely from the operation, without noteworthy aggravation of his previous paretic condition.—*Medical Progress.*

THE EXTENSION OF GONORRHEA TO THE PARS POSTERIOR URETHRÆ.

After an examination of fifty cases of first infection of gonorrhea, Dr. Heisler concludes (*Med. Era*):

1. That posterior urethritis appears much earlier than is usually taught and accepted by the best writers.

His statistics show that in twenty per cent. of the cases it appeared in the first week, in thirty-four per cent. in the second week, and in fourteen per cent. in the third week after the appearance of the discharge.

2. Constitutional affections, especially syphilis, have little influence in hastening the occurrence of posterior urethritis, although the affection occurs more frequently in syphilitic subjects.

3. Occupations which necessitate long-continued exertion play an important role in expediting affections of the deep urethra.

4. The affection is equally prevalent whether injections are used or the treatment be confined to internal medication.

5. The musculus compressor urethræ has no power to prevent the transference of the infective agent to the deep urethra.

6. The gonorrheal inflammation of the anterior urethra cannot be regarded as an affection of such typical course as is asserted by the majority of authors, *i. e.*, an inflammation starting in the fossa navicularis, reaching the bulb in three weeks; then, when the acme of intensity is attained, passing over to the posterior urethra. In the great majority of the cases, this happens during the first or second week without the direct transference of the gonorrheal pus by means of catheters or sounds.

It must therefore be looked upon, not as a complication of anterior urethritis, but as a direct continuation of it.—*Med. Review.*

MEDICINE

THE POPULATION QUESTION AND SYMPHYSEOTOMY.

British obstetricians are usually averse to craniotomy or any other obstetric operation which entails the sacrifice of the child. Their scruples, however, though essentially both professional and conscientious, are based on respect for individual life rather than on any abstruse questions connected with the maintenance of the population. Those questions are of greater import across the channel. At a recent meeting of the Académie Mèdecine, M. Charpentier spoke in favor of Sigault's operation, or division of the symphysis. This operation has lately been revived, and performed largely in Naples with excellent results. M. Charpentier concludes his address by the following words to French obstetricians: "Do not abandon to the foreigner the benefits of an operation which, was first successful in our country. Try once more symphyseotomy, which, while avoiding all the evil results of embryotomy and Cæsarean section, still too frequent, will allow you to save almost certainly both the lives entrusted to your care. Remember that in this respect you hold in your hands a means of diminishing infantile mortality, an aim towards which all your efforts ought to tend, for now more than ever France has need for her children." We have already noted that Professor Morisani intends to bring the subject of symphyseotomy before the International Medical Congress at Rome in 1893. The complete revival of Cæsarean section has surprised the profession, yet the resuscitation of symphyseotomy is perhaps still more remarkable.—*Brit. Med. Jour.*

THE NATURE AND FREQUENCY OF DISEASE OF THE SPINAL CORD IN GENERAL PARALYSIS.

The spinal cord has been examined by Dr. Köberlin in twenty-three cases of general paralysis, examination being made of pieces from the cervical, dorsal and lumbar regions in each case, and the sections were stained with Wegiert's hematoxylin and with carmine. Morbid change was seen in the lateral pyramidal tracts and posterior columns. Sometimes Goll's columns alone are degenerated, at others Burdach's columns are affected, though to a less extent in most instances. Cases were observed where Goll's columns were separated by streaks of degenerated tissue from the outlying area of Burdach's. The morbid appearances comprise atrophy and degeneration of the medullated fibres with excess of connective tissue, and the presence of numerous corpora amylacea. The degeneration was found to be remarkably symmetrical both in transverse and longi-

tudinal sections. In one case syringomyelia was found but this case the author considers atypical. The cases were classified by Dr. Köberlin into: (1) Affection of the crossed pyramidal tract. (2) Affection of the posterior columns. (3) Affection of both. In one case of the first mentioned class there was a difference in weight between the cerebral hemispheres, and as the more atrophied hemisphere was opposite to the diseased lateral tract, the author is disposed to think that the pyramidal degeneration was secondary. Amongst the cases in the second class he gives reasons for considering the cord-disease as primary in some; in others the disease was probably first developed in the brain. In none of the twenty-three cases were the anterior columns or the lateral cerebellar tracts diseased.—*Dublin Journal of Medical Science.*

CONGENITAL BALDNESS AND PEMPHIGUS.

Bar (*Arch. de Tocol. et d' Obstét.*, December, 1891) exhibited before the Société Obstétricale de Paris a child born with circular patches of baldness on the hairy scalp, and a bulla of the character of pemphigus on the right hand. He suggests that the patches on the scalp might represent pemphigus at its last stage, although that disease is rarely seen after birth, except on the hands and feet. There was talipes in this case, and the pregnancy was complicated by hydramnios. No positive history of syphilis could be obtained.—*Brit. Med. Jour.*

THE CHANGES IN THE BLOOD IN DISEASE.

Sadler (*Fortschritte der Medicin,* Bd. x., 1892) reports the result of a large number of observations made at the clinic of v. Jakach, at Prague, upon the blood in various pathologic conditions. It appears that the number of red corpuscles is diminished, though, as a rule, not considerably, in the course of acute disease. In chronic disease, especially when cachexia develops, the diminution may be decided. Under the same conditions, the hæmoglobin suffers a diminution relatively greater than that of the corpuscles. To these generalizations, tuberculosis, especially if the patient be well nourished, and valvular disease of the heart, especially mitral disease, may constitute exceptions. In some cases of chlorosis, the number of red cells may for a long time be almost normal, while the proportion of hæmoglobin is considerably diminished. On the contrary, in cases of anæmia there is decided diminution both in the number of red corpuscles and in the proportion of hæmoglobin. The greatest diminution in the number of red corpuscles occurs in pernicious anæmia, though almost as profound a change may be observed in the case of anæmia following hemorrhage or resulting from other causes, such as atrophy of the glands of the stomach. In cases of pernicious anæmia, Sadler failed to find hæmoglobin in relatively greater proportion than the number of red corpuscles. In cases in which as a result of acute, profuse diarrhœa, the consistency of the blood was augmented, the number of corpuscles and the percentage of hæmoglobin were increased. A similar condition appeared in some cases of enteric fever. In untreated cases of malarial fever, the number of white corpuscles is increased. Physiologically, leukocytosis is present during digestion. Leukocytosis is also present in the puerperal state, at least for twelve days following labor. The white corpuscles are usually in excess in acute diseases attended with exudation, viz., pneumonia, pleurisy, peritonitis, pericarditis, meningitis, polyarthritis. It seems likely that there is a relation between the character of exudation and the presence or absence of leukocytosis. If leukocytosis appear in the course of enteric fever it must be considered as evidence of the existence of a complication. Leukocytosis occurred in pulmonary tuberculosis only after injections of tuberculin. Leukocytosis was present in a minority of cases of carcinoma. Four case of sarcoma present leukocytosis. There was little or no excess of leukocytosis in three cases of lymphadenitis.—*Amer. Jour. Med. Sci.*

EPILEPTIC MANIFESTATIONS RESEMBLING WRITER'S CRAMP.

Dr. Féré (*Gaz. des Hôpitaux*) speaks of a patient in whom the epileptic aura took the form of a cramp similar to that seen in writers.

The manifestation becomes general so that the attack soon resembles one of ordinary epilepsy.

As soon as the attack is passed he is able to write again, which renders the differential diagnosis easy, since this would not be the case in true writer's cramp. The bromides when given produced marked improvement.

OBSTETRICS.

HYDATIFORM MOLE.

The following is a general outline of the treatment prescribed by Dr. George A. Cragin (Boston *Med. and Surg. Jour.*): When diagnosis cannot be made these cases must be treated on general principles, and it must often happen that nothing is done until hœmorrhage, exhausting nausea and vomiting or convulsions indicate the immediate emptying of the uterus. When once the diagnosis is made the following points have important bearing on the treatment:

1. The patient is liable to repeated hæmorrhages sufficient to cause grave general disturbances, and to sudden severe hæmorrhage.
2. The closed, rigid os is almost the rule even after severe hæmorrhage.
3. The mole can be delivered without complete dilatation, and with no more loss of blood than is almost certain to follow later, when it may not be easy to interfere.
4. The uterus contracts well after being emptied, even when pains have not been present before dilatation was begun.
5. Uterine stimulants and tampons will generally have to be supplemented by the hand or curette.
6. Tampons with delay increase the danger of infection.
7. Incomplete expulsion makes hæmorrhage and sepsis liable.
8. The possibility of a thin uterine wall should be borne in mind when the curette, the hand in utero, or Crede's method of expression are used.

In the light of the above facts the proper course to be followed is clear. The uterus should be emptied as soon as possible. Just how to begin this, however, may be a question. To rely upon tampons, colpeurynter and ergot would be poor practice. The process is slow and imperfect; hæmorrhage and exhaustion greater. Yet in cases with rigid os and long, dense cervix, undoubtedly the firm vaginal tampon is a most effective means of starting up pains, and getting a soft, dilatable os.

ON THE PREVENTION OF LACERATIONS OF THE PERINÆUM PRIMIPARÆ.

The experience gained in a large midwifery practice here for some years has convinced me that the following suggestions, if thoroughly and carefully attended to, will, in the large majority of cases, allow of the passage of the fetal head with laceration of the perinæum; and this is borne out by the fact that in primiparous cases where the child was born before my arrival I have invariably observed some degree of laceration of the perineal tissue. I do not consider that the mere "supporting" of the perinæum during the birth of head is, *ipso facto*, sufficient to prevent laceration; it is but a factor in the result desired, and is beneficial by delaying any too rapid advance of the presenting part. The chief causes of rupture of the perinæum are undoubtedly—

1. Too rapid advance of the presenting part before sufficient dilatation of the parts has had time to take place.
2. Abnormal rigidity of the parts.
3. The outlet is too small or the presenting part too large.

As the presenting part reaches the perinæum the parts are expanded in all directions, and, therefore, two fingers, well anointed with antiseptic uterine lubricant (Summer's), should be used during or directly preceding the pain in order to assist dilatation by expanding the perinæum in every direction. During the intervals between the pains a sponge wrung out in warm water aseptic with carbolic acid should be applied to the perinæum, the result being some softening of the parts by relaxation of the soft parts, and in addition this application is grateful and comforting to the patient and facilitates the removal of any mucous or excreta during the passage of the presenting part. Supposing the head to present, as is more commonly the case, as labor progresses pressure should be exerted upon it in a direction to promote flexion of the chin upon the sternum, and this manœuvre not only places the head in a more favorable position for passing the perinæum but is sufficiently dilated to prevent any rupture of the same.—Charles H. Miles, L. R. C. P. Lond.—*In Hosp. Gaz.*

THE USE OF IPECACUANHA IN UTERINE INERTIA.

Drapes says this remedy in simple atony of the uterus is a powerful agent in producing uterine contraction during the first and second stages of labor.

In general, two or three doses of from ten to fifteen drops of the wine of ipacacuanha, given at intervals of ten minutes, produce in a short time marked activity of uterine action and a rapid birth. It is much better than ergot, as it does not produce tetanic contraction, but only induces normal and regular explusive efforts. —*Ex.*

GYNECOLOGY.

TECHNIQUE OF CÆSAREAN SECTION.

Chas. Jewett, M. D., in discussing this subject in the *New York Journal of Gynæcology* says, the objection to the rubber tube, in the provisional ligation of the cervix, that it is liable to injure the tonicity of the muscles, is obviated by employing a large tube with thin walls, which spreads as it is drawn taut and distributes the pressure over a large surface. It is the practice of Sanger and others after separation of the placenta and membranes to scrub the cavity with a fold of gauze. In the absence of infected fluids after peeling off the membranes the uterine cavity should be left literally untouched. The endometrium is left aseptic after removal of the secundines, and antiseptic douching or scrubbing is not only uncalled for but injurious; a septic uterus on the other hand should not be trusted to the conservative operation at all, but should be amputated. With care to prevent the entrance of much blood and liquor amnii into the abdominal cavity, the usual peritoneal toilet may be almost wholly omitted. The obvious advantage of operating with deliberate preparation before the rupture of the membranes and with the patient in full strength furnishes a strong argument for an appointed time if possible, shortly before the expected date of labor. The main conditions of success in Cæsarean section are asepsis, and the accurate suture of the uterine wound. Reasonable rapidity, however, is important, and the length of time should not exceed three-quarters of an hour if the best results are to be expected. To these conditions should be added the early use of saline catharsis after operation. The writer's experience, not alone in these cases, but a somewhat extensive one in analogous conditions, leads him to place a high value on early resort to peritoneal drainage by the intestines.

HERNIA OF ABDOMINAL CICATRIX AFTER LAPAROTOMY.

Goullioud (*Arch. de Tocol. et de Gynec.*, July and August, 1892) compares the ventral hernia of pregnancy and abdominal tumor with the troublesome hernia of the cicatrix after ovariotomy and other forms of abdominal section. In the first form, common amongst multiparæ, the linea alba is simply relaxed through excessive distension of the tissues which compose it. The aponeurotic layer of the abdominal walls remains entire, though thin, like the skin, and peritoneum, from stretching. In hernia after operation, the protrusion is due to non-union of the aponeurotic layer of the linea alba. Hence Gouillioud maintains that the aponeurotic layer of the abdominal incision should always be united by a special line of sutures. Three radical operations for the cure of hernia of the cicatrix are practised. Simon inverts all three layers and, making raw surfaces on the skin, unites them by suture. Maydl resects the entire sac and applies a special line of suture to each layer. In a third method the skin is resected, the other layers inverted, and their folded edges sutured, and lastly the edges of the skin wound united by a separate line of suture. This operation, advocated by Chrobak, is more suited for ventral herniæ not due to operation. It has the advantage of avoiding the opening of the abdominal cavity. Complete resection, however is as a rule preferable in hernia after ovariotomy, etc. The serous layer of the sac usually possesses secondary pouches, bands and omental adhesions. Their removal is clearly an advantage. Guillioud warns the surgeons of the difficulties of resection. The three layers are fused by tissue more or less dense. Hence free excision of the sac renders the operation less irksome, and is more advisable to the patient; the further the surgeon cuts from the limits of the cicatrix the easier will be the separation of the layers. When separated, after long and careful dissec-

tion, they must be sutured separately. The fibrous ring forming the neck of the sac often gives great trouble. The operation of resection is most likely to succeed when the recti are not overstretched; when, in fact, they still contract firmly. A perfect union of the aponeurotic layer is, of course, essential. Without such union the secondary operation will be followed by a yet larger hernial protrusion. —*British Medical Journal.*

A DERMOID CYST CONTAINING A HEART.

At the October meeting of the Academy of Medicine, Dr. J. A. Johnstone related (*Cincinnati Lancet-Clinic*, October 15) a case of this nature, exhibiting the specimen. He said:

The object in reporting this case is to show something very unique, and something I have never found before in a dermoid cyst—the interior of this gives you a very well-formed attempt at the formation of a heart. My second reason for making the report is to show what nature will do towards saving the life of patients who have had accidents. This tumor existed for several years. The patient was an Irish girl aged about twenty-five years, and gave a very indefinite history. Along in July last she had an attack of pain in the abdomen, and she said it seemed as though she was going to die right away, but it all passed off. However, when I came to do the operation, the cause of the pain was very apparent. The axis had been rotated upon itself almost twice and a half. The axis being the round ligament, this had been enough to excite a very marked peritonitis. The tumor was adherent, tremendously large vessels passing into it. The tumor was slate-colored at the time of the operation.

This attempt at the formation of a heart is something of which I never knew. There is a case recorded where an eye was pretty well formed, the cornea being well shown. Gray matter of the brain has been found, and, in fact, all portions of the hypoblast and mesoblast have been found. I am led to believe that the simple variations of the cyst is the fault of the Graafian follicle, but the formation of the dermoid is due to the ovum, which is retained, and in some way or other produces this formation.

The patient recovered.

HYSTERECTOMY.

Mr. Lawson Tait contributed to the Obstetrical Society of London (*N. Y. Jour. of Gyn. and Obst.*) notes of two cases of hysterectomy. The first patient was fifty-two years of age; had ceased to menstruate two years ago, and during the two months before Mr. Tait saw her the tumor had grown more rapidly. It reached up to the sternum and pseudo-fluctuation was distinctly present. When the abdomen was opened the tumor was found to be a myoma, and fluctuation was so distinct that a trocar was plunged in, and six pints of fluid removed. The tumor (which weighed about five pounds) was clamped and removed. The patient made an uninterrupted recovery. The second case was that of a woman, aged forty-two, who had had three children, all the labors being normal. When thirty-seven years old she began to lose profusely, and then noticed a substance in the lower abdomen. A large, multinodular myoma, reaching above the umbilicus, was found on admission, and the appendages were removed May 13, 1888. She reported herself July 26, 1890. Menstruation had not recurred, and she felt perfectly well. The tumor was found to have nearly disappeared. Later on metrorrhagia recurred; the uterus was explored for polypi, but none were found, and the endometrium was curetted with temporary relief. The discharge came on again, and the tumor had again increased in size; so on October 12, 1891, hysterectomy was performed. The old multinodular myoma was hardly to be seen, but a large, independent growth of a soft, endematous character had grown to the size of the original tumor. The patient made an uninterrupted recovery. The case was a unique example of a soft myoma springing up after a multinodular one had been removed; and Mr. Tait considered that whilst the latter variety of myoma was a disease of menstrual life, the former was not so.—*Med. Review.*

Laparotomy for the treatment of tubercular peritonitis gives very flattering results. The ascitic form gives a mortality of 20 per cent., permanently cured at the end of a year 35 per cent. of cases. The dry, fibrous type of the disease gives a mortality of 10 per cent., and of those

who survived the operation 50 per cent. were living and well at the end of the year. The purulent ulcerous type of peritonitis gives 40 per cent. of mortality and about 25 per cent. remain permanently well. In tubercular peritonitis of genital origin, about 25 per cent. remain permanently well.—*Ex.*

VAGINAL HYSTERECTOMY IN PELVIC SUPPURATION.

At a recent meeting of the Paris Surgical Society. Dr. Terrillon spoke favorably of this extreme measure. He has operated on four cases of old-standing pelvic suppuration with hectic exacerbations and rectal and vagnal fistulæ.

The first patient had been ailing for two years subsequent to a miscarriage; parametric infiltration extended up as high as the navel, and the uterus was firmly fixed in the inflammatory deposit. Abdominal section proved useless; the omentum could not be detached, and the intestines were so firmly adherent that no attempt was made to liberate them. The uterus was at once extirpated from the vaginal side. On the twenty-eighth day serous symptoms developed—owing to retention of pus behind the vaginal fistula cicatrix. The fever ceased as soon as an exit was made for the pus; but a vagina fistula remained.

In the second case—similar to the first—abdominal section was found impracticable, and vaginal hysterectomy was performed eight days later, with the result of effecting a complete cure.

In the third case the patient had been ill for nine years, and was suffering from a lichenous eruption which had been attributed to septicæmia; albuminuria, vomiting and fever were present. Vaginal hysterectomy proved very troublesome, and considerable shock followed. Nevertheless, the patient recovered, and the annoying eruption disappeared.

The fourth patient had peen ill for twelve years, and had suffered from severe continuous pain and fever since two months. Vaginal hysterectomy was preformed on the left side; the vagina cicatrized nicely, but a rectal fistula remained.

The last mentioned case is sufficient to show—according to the author—that the operation does not always bring about a radical cure; the first two cases, on the other hand, demonstrated that vaginal hysterectomy may succeed after abdominal section has proved of no avail. Although the operation appears especially desirable in cases where there is a well-incysted abscess, Dr. Terrillon considers it required in cases of old extensive and ill-defined suppurative processes with fistula, adhesions, and parametric infiltration of the parieties.—*Merck's Bulletin.*

HYGIENE.

THE PATHOLOGICAL EFFECTS OF HEAT.

Some interesting observations have been recorded by Drs. Coplin, Bevan, and Sommer on the effects of heat as manifested in workmen in a sugar refinery in Philadelphia. During the very hot weather the number of men on duty was 800 during the day, and 500 during the night, and in the course of eight days 213 of these came under treatment. The most common and troublesome symptom complained of was cramp in the epigastrium, with not infrequently similar pain in the calves, sometimes in the back and hypogastrium, less commonly in the thighs and upper extremities. Other symptoms were difficulty of respiration, pain in the splenic or hepatic regions, headache in nearly all cases, nausea, rarely vomiting, agitation, pale skin (if moist, cold, and clammy). In a few cases diarrhœa was present, in the majority constipation preceded the attack. Later delirium, sometimes active, came on, with convulsive movements, ending, in fatal cases, in coma. The pulse was irregular, the urine scanty and high-colored. Pain in the cervical region, and generally in the back, was complained of; the patient may be conscious of the high temperature, but as a rule he felt cold when brought out of the intense heat. There was great thirst. The pathology of the cases was obscure, but the symptoms pointed to a large accumulation of blood in the portal system. The area of hepatic dullness was largely increased, as a rule, in proportion to the intensity of the attack, and the same increase could be noticed in regard to the spleen. Curiously enough, the rectal temperature was two to five degrees higher than the oral. With regard to the temperatures of the men who complained, in two the temperature was 108° F.; one of these died, the temperature reaching 110° F. In twenty-eight the

temperature was 105° F., in fifty between 102° F. and 105° F. In the remaining 133, the temperature in sixty-two was above 101° F.; in forty-nine between 100° F. and 101° F.; in eight between 99° F. and 100° F.; in eleven between 97° F. and 99° F.; in one, 96° F.; and in two between 95° F. and 96° F. There were more cases of illness in the rooms where the atmosphere was humid than in those where it was drier, and there was no evidence that men who drank beer freely suffered as much as those who drank little or none at all, while those who drank largely of water were extremely prone to suffer.—*Med. Press.*

DIETETIC TREATMENT OF TYPHOID FEVER.

In a recent article on this subject by Beatty Wallace, he claims that milk is the safest and best diet.

It may be diluted with soda water or lime water and may be peptonized.

Should diarrhœa exist, the milk may be boiled.

If the patient can take milk alone it is the best food during the entire illness.

Beef tea may also be given, and is a useful addition to milk.

Farinaceous foods he considers objectionable because of the flatulence following their use, and the liability of a fresh outburst of fever.

Beaten up eggs should be avoided unless milk cannot be taken.

In any case two or three pints of liquid food will be found sufficient for an adult each day.—*Epitome of Medicine.*

NEWS AND MISCELLANY.

IDIOPATHIC.

This a word used very frequently by the profession, but it is doubtful whether it is a proper term. If by the term we mean a disease without an underlying cause, it certainly has no place in medical nomenclature. When we cannot say what ails a patient it is better to say that we do not know than to use the word idiopathic. "Idiopathic" pluritis and "idiopathic" pericarditis are slaying hundreds of people to-day. "Idiopathic" peritonitis slew thousands of women before it was demonstrated that peritonitis never existed without underlying cause.—*Ex.*

USED WITH EFFECT.

A practitioner in Chicago told me that in a labor case, after giving to the husband, who was acting as nurse, the usual order, "Let me know if everything is not right," he left. In the course of a few days, the nurse called on the doctor to ask if the foul odor could not be stopped. He said, "Did you use the syringe I gave you?" "Oh! yes, doctor, and although it does not affect the odor, it moves the bowels finely." Another case, which was under the care of a brother practitioner in the town in which I live: The doctor took the Davidson syringe, showed the intelligent (?) nurse how to use it in a basin of water, and left happy. Next day, not liking the appearance of the patient, he inquired, "Did you use the syringe?" "Yes, doctor, but the mixture you ordered was no sooner down, than it all came up again, and everything that had been eaten for a week." It is a fact that the nurse forced a pint of soap-suds down the patient's throat, by means of the syringe.—Dr. Caldwell, *Southern Med. Record.*

A NATIONAL BACTERIOLOGICAL INSTITUTE.

This is advocated by the *International Journal of Surgery* which says, *inter alia*, that a central laboratory should be established by the Government equipped with all the modern appliances for the experimental study of contagia, with experiment stations, and with a staff large enough to cover the whole ground and paid well enough to secure the most efficient services. Finally, and above all, such an institution must be entirely free from the taint of politics. The Imperial "Gesundheitsamt," at Berlin, which is conducted by Professor Koch, may well serve as a model of what a modern civilized government should do in this direction. There are, to be sure, a number of laboratories either private or connected with the medical schools, but the workers there are almost invariably men who depend upon active practice or teaching for a livelihood, and who pursue bacteriological research as amateurs. The entire time and all the energies of the best men are requisite for this work. Only the Government can guarantee these conditions.

Only the Government has the force at

hand to investigate contagious diseases; and on the Government, representing the entire community, the duty devolves. Systematic and careful work in the investigation of human and animal plagues; work done on the largest scale and with the facilities that only the government can supply; this is far more important to the sixty millions of this community than petty trade and boundary disputes.—*Salus supremum jus!—Med. Review.*

At the recent meeting of the American Orthopedic Association held in the City of New York, September 20, 21 and 22, 1892, the following officers were elected to serve for the ensuing year: President, Dr. A. J. Steele, St. Louis; Vice-Presidents, Dr. Samuel Ketch, New York; Dr. Arthur J. Gillette, St. Paul; Treasurer, Dr. A. B. Judson, New York; Secretary, Dr. John Ridlon, 34 Washington St., Chicago. The next annual meeting will be held in St. Louis, the third week in September, 1893.

ELECTRICITY AND FILLED TEETH.

George E. Zinn (*Dental Review*) says: Some patients are of such a bodily temperament, as to act like Leyden jars or storage batteries. The electricity may be generated by the friction of the hands on a dry substance, such as cloth. It is not evenly distributed through the body, and whenever a metal instrument comes in comes in contact with the tooth, there results an electric current for the equalizing of the electricity. This accounts for the pain sometimes experienced from touching one's own filled tooth.

Some dentists are likewise living storage batteries. They have their offices carpeted and the friction of their feet generates electricity, they approach the patient to examine his teeth, touch a filled one with an instrument and the patient experiences a sharp pain. This is caused by the passing of electricity from his body through the instrument to the tooth and the body of the patient by means of the connection made with the tooth. It is a well known fact that bodies have different capacities for electricity, that when two bodies unequally charged in proportion to their capacities come in contact, a current passes from the one to the other, equalizing the electricity of the two bodies, and it is so with regard to the patient and dentist. This explanation seems to me clear. I have heard it attributed to the "Electrical Condition" but not explained, consequently I have told my patients it was due to certain "Electrical Conditions," but never had a rational understanding of it. They, of course, would go home half believing it was so, or fully believing that it was the fault of the filling or of my work.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY FROM OCTOBER 16, 1892, TO OCTOBER 22, 1892.

First Lieutenant George D. DeShon, Assistant Surgeon, U. S. Army, is relieved from duty at Columbus Barracks, Ohio, and will report in person to the commanding officer, Fort D. A. Russell, Wyoming.

So much of S. O. 230, as relates to change of station of Captain Eugene L. Swift, Assistant Surgeon, is suspended until further orders, and he is granted leave of absence for one month, on account of sickness, with permission to apply for an extension of one month.

Captain Edward R. Morris, Assistant Surgeon, U. S. Army, is relieved from duty at Fort Custer, Montana, and will report in person for duty to the commanding officer, Fort Warren, Mass., relieving Captain Peter R. Egan, Assistant Surgeon, U. S. Army.

Captain Egan on being relieved by Captain Morris, will report in person to the commanding officer, Fort Custer, Montana, for duty at that post.

First Lieutenant Allen M. Smith, Assistant Surgeon, U. S. Army, is relieved from further duty at Fort Assinniboine, Montana, and assigned to duty at Fort Custer, Montana, where he had already been ordered to temporary duty.

Major John C. J. Happersett, Surgeon, U. S. Army, is relieved from duty at Fort Custer, Montana, and will report in person to the commanding officer, Fort Keogh, Montana, for duty at that post, relieving Major Philip F. Harvey, Surgeon.

Major Harvey on being relieved from duty by Major Happersett, will report to West Point, N. Y., and report in person to the Superintendent of the U. S. Military Academy, for duty at that post relieving Major Henry McElderry, Surgeon.

Major McElderry, on being relieved by Major Harvey, will repair to Omaha, Nebraska. and report in person to the commanding general Dept. Platte, for duty as attending surgeon.

First Lieutenant William E. Purviance, Assistant Surgeon, U. S. Army, is relieved from duty at Jefferson Barracks, Missouri, and will report in person to the commanding officer, Fort Sherman, Idaho, for duty at that post, relieving Captain William W. Gray, Asst. Surgeon.

Captain Gray on being relieved by Lieutenant Purviance will report in person to the command-

ing officer, Fort Schuyler, New York, for duty at that post.

The leave of absence granted First Lieutenant Samuel R. Dunlop, Assistant Surgeon, is extended one month.

Lieutenant Colonel Charles R. Greenleaf, Deputy Surgeon General, is appointed member of a board of officers, to meet at Helena, Montana, on the first day of November, 1892, or as soon thereafter as practicable, for the purpose of selecting a site for a military post at that place, as provided for under an Act of Congress approved, May 12, 1892, entitled "An Act to establish a military post at or near the city of Helena, in Lewis and Clarke County in the state of Montana."

First Lieutenant Allen M. Smith, Assistant Surgeon, U. S. Army, is relieved from further duty at Fort Yellowstone, Wyoming, and will proceed to Fort Custer, Montana, and report to the commanding officer of that post for temporary duty.

Leave of absence for one month, to take effect upon his relief from duty at Fort Columbus, N. Y., is granted Major Johnson V. D. Middleton, Surgeon, U. S. Army.

OFFICIAL LIST OF THE CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE FOR THE THREE WEEKS ENDED OCTOBER 15, 1892.

Purviance, George, Surgeon. Granted leave of absence for seven days, Oct. 12, 1892.

Banks, C. E , Passed Asst. Surgeon. To rejoin station at Portland, Maine, Oct. 14, 1892.

Devan, S. C., Passed Asst. Surgeon. Ordered to Washington D. C., for special duty, Sept. 29, 1892.

Kallock, P. C., Passed Asst. Surgeon. To rejoin station at Boston, Mass., Oct. 14, 1892.

Wasdin, Eugene, Passed Asst. Surgeon. To rejoin station at Charleston, S. C., Oct. 3, 1892.

McIntosh, W. P., Passed Asst. Surgeon. To proceed to Buffalo, N. Y., for temporary duty, Sept. 25, 1892. To proceed to Ellis Island for temporary duty, Sept. 30, 1892. To report in person to the Supervising Surgeon General, Oct. 8, 1892. To rejoin station at New Orleans, La. Oct. 10, 1892.

Pettus, W. J., Passed Asst. Surgeon. To proceed to New York, N. Y., for temporary duty, Sept. 25, 1892.

Magruder, T. M., Passed Asst. Surgeon. To proceed to Tacoma, Wash., for special duty, Oct. 7, 1892.

Cobb, J. O., Passed Asst. Surgeon. To rejoin station at Detroit, Mich., Oct. 7, 1892.

Stoner, J. B., Passed Asst. Surgeon. To rejoin station at Pittsburgh, Pa., Oct. 3, 1892. Granted leave of absence for seven days, Oct. 4, 1892.

Rosenan, M. J., Asst. Surgeon. Relieved from duty at Cape Charles Quarantine, Oct. 11, 1892. Granted leave of absence for thirty days, Oct. 13, 1892.

Cofer, S. E , Asst. Surgeon. Granted leave of absence for three months on account of sickness, Oct. 15, 1892.

Gardner, C. H., Asst. Surgeon. To report to the Medical Officer in Command, San Francisco, Cal., for duty, Oct. 12, 1892.

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Original Articles.

OBJECT LESSONS IN GYNÆCOLOGY.

By W. H. LINK, A. M., M. D.,
PETERSBURGH, INDIANA.

I.

THE GALL-STONE DIAGNOSIS.

Pelvic inflammatory conditions simulate so many and so various forms of disease, that the general practitioner may well be pardoned who fails to attribute to their proper cause the myriad symptoms arising from even the grossest pelvic lesions. One of the most striking and misleading symptoms due to well-marked disease of the appendages, is a severe, agonizing and sickening pain, radiating across the epigastrium, and locating with great intensity in the region of the gall-bladder. The patient sits up in bed, leans forward, grasps the region of the gall-bladder and stomach with both hands, and retches as though she would throw up her immortal soul. What makes this symptom more misleading, is the mild jaundice which often follows, with coated tongue, loss of appetite, and marked tenderness on pressure over the locality of the gall-bladder. When the practitioner, for the first time sees the patient in one of these paroxysms, his attention is so forcibly called to the liver as the *fons et origo* of the trouble, that he is very prone to stop at that organ, and interrogate no other anatomical structure for information. A diagnosis of gall-stone colic is promptly made, and, knowing the futility of medicine for permanent relief or curative action on such a pathological condition, he confidently reaches for his hypodermic syringe and promises immediate relief. Here another surprise awaits him. Heretofore various attacks of abdominal pain, such as spasmodic colic or cholera morbus, or simple gastralgia due to acute indigestion, have, in his hands. yielded promptly to a single injection of an eighth or a sixteenth of a grain of morphia; but in this case the patient receives from one-half to three-fourths, or even a grain, ere she can be quieted, and even then her rest is only fitful, and the morphia must be repeated every 4 or 5 hours, often for days, before the attack subsides, which happens whenever the pelvic congestion, due to a menstrual molimen, passes away under the influence of the pain-enforced rest, the lightly injested food, a consequence of the anorexia of disease, and the free purgation inaugurated to overcome the constipation resulting from the large quantity of morphia necessary to subdue the imaginary gall-stone cramps.

This is a symptom which is, in my experience, most often found associated with a large, adherent tubo-ovarian cyst of one side, filled with sanguino-purulent material and lying high up, while the tube of the other side is highly inflamed and contains a small collection of pus, with an adherent, atrophied and cirrhotic ovary at its fimbriated and occluded extremity. There are certain precautions to be observed when we are called to such a case that will always prevent us from falling into error. First, when called to see a woman suffering from any severe or obscure form of abdominal pain, suspect the pelvis, and proceed to interrogate it. In these cases where gall-stones are suspected, if the disease is located within the pelvis, a great many other symptoms may be elicited by judicious questioning, which ought to pave the way for a digital examination. The pains and nausea will be found to precede, and become coexistent with, menstruation, which is very irregular as well as painful. A profuse, purulent and offensive leucorrhœa is a constant and disgusting accompaniment. The stomach is irritable and delicate at all

times, while the appetite is capricious. There is marked discomfort, often severe pain upon motion. Going up or down stairs, or running a sewing-machine will frequently bring on an attack of pain or greatly prolong the menstrual flow. Riding in a jolt-wagon, or in a buggy over rough roads, can not be done without great suffering. If the disease is on the left side, there is marked pain in the left iliac region when the bowels move, and this is much increased when defecation follows upon a previous condition of constipation. The bladder may be irritable, compelling the patient to micturate with great frequency and straining, and only a small quantity of urine can be voided at a time. Sexual intercourse is always painful, very seldom gratifying, never fertile, and often utterly impossible. There is frequently a history of previous abortion or abortions, and not seldom a gonorrhœa can be traced to the husband. While we need not be surprised to find that at some previous confinement she had a "bad getting up," or a "very tender belly with fever for a long time and has never been stout since."

Should several or all of these facts be elicited, a careful bimanual examination should follow. If there is leucorrhœa, we will find the size, position, outline, consistence and patulousness of the uterus all to be considered. We shall not be disappointed to find a soft and patulous os, an enlarged and softened body and fundus, with the uterus in a state of chronic retroversion, and fixed in that position by firm adhesions. The fundus may likewise be pushed to that side opposite the disease, thus lying in an oblique position. On account of the contracture of the adhesions, the uterus may be partially prolapsed. The vault on one or both sides may be found full and tender, and, bimanually, (though not always,) a fluctuating tumor the size of a small lemon may be identified on one or both sides, while pushing the uterus toward the fullest and tenderest side with the finger on the cervix, provokes loud complaint from the patient. To elicit fluctuation, or to determine the consistence of any growth filling the vault, is best done by placing one finger in the vagina, pushing it deeply up against the lateral vault, and then placing the other hand on the abdomen, by making deep pressure downward, backward and inward the growth is pushed against the finger in the vault. Then by a gentle palpation with the outside hand held firmly, fluctuation can be recognized by the finger tip held against the vaginal roof. Given such a case, and having satisfied ourselves that pelvic disease exists beyond a doubt, the next question is, what shall we do to relieve our patient? There are two courses open to us, one of which is temporary, palliative, and only to be used to gain time for the second or radical and curative surgical treatment. Saline cathartics, such as mag. sulph., given in small doses, say a teaspoonful every hour till six or eight doses are taken, will afford the quickest and most enduring relief short of any but surgical methods. Hot douches, the application of dry or moist heat over the abdomen, are good measures for the immediate palliation of pain, and to tide the sufferer over the acute attack in order that time may be gained to prepare for the necessary surgical measures that alone can bring permanent relief. Nothing short of a section, with removal of the morbid structures, will prove in the least curative, and the less delay there is in resorting to surgery, the brighter the prognosis, both as regards the final completeness of cure and the length of time necessary for the acquired reflexes to forget their old habits.

The relief which promptly follows a thorough removal of offending organs by abdominal section in these cases, is often as gratifying to the medical attendant as it is surprising to the patient and her friends. The measure of comfort and freedom from pain and suffering that follows at once the necessary surgical work, is most often in an inverse ratio to the delay in the inauguration of such measures. Time always gives an opportunity for tubal leakage, with its resulting circumscribed peritonitis; increases the strength and multiplies the number and extent of adhesions; gives rise to distortion, displacement and degeneration of structures, producing constriction of nerve-trunks and aberration of functions; abolishes normal action in glandular secretion, or excretion favoring excess of the one, paucity of the other, thus converting local into somatic disease by the mechanical effects of pressure, obstruction and displacement, or by the more insidious, but no less baneful effects of long continued irritation on

nerve-ends, results in morbid reflexes, which, though remote and obscure, are none the less destructive to comfort or elusive to diagnosis.

The following illustrates the difficulties of diagnosis met with in such cases as I have attempted in this article to describe:

Was called late one evening to see Mrs. V., who, the attending physician stated, was suffering from an attack of gall-stones. Had been under his care for several months, with recurring attacks of pain and vomiting. Found her drawn up in bed, hands pressed strongly against the right hypochondrium and stomach, and at intervals straining and vomiting with much effort and in great agony. Tongue coated, bowels constipated, temperature elevated, bladder irritable, and she complained of a sickening pain radiating over region pressed on by hands, and especially at a spot marking the location of the gall-bladder. This region was markedly tender on pressure. There was slight jaundice, complete anorexia, puffy skin, swollen eye lids and intense headache. She had just closed a menstrual period. Personal history showed last child 9 years old, miscarriage six years previous, puerperal peritonitis, specific infection by previous husband, marked irregularity of menstruation ever since, great suffering at times, general invalidism. Sexual intercourse absolutely repulsive on account of pain. I suggested a pelvic examination which was acceded to. Examination showed uterus slightly enlarged, retroverted, partially prolapsed, firmly bound down by adhesions, os soft and patulous, profuse leucorrhœa, left vault full, elastic, very tender to the touch, right vault less so, right obliquity of uterus. Pushing uterus toward the left, caused great pain which was referred to locality complained of when first seen, and which increased the efforts to vomit.

Diagnosis: Tubo-ovarian disease. Section suggested as the only means of cure. Another physician having been called into the case, and having carefully examined her, he was inclined to favor the idea of gall-stones. Wishing to be certain, and having a great deal of respect for his opinion, knowing him to be careful and conscientious, I asked one of the leading Western abdominal surgeons to examine her. He at once confirmed my diagnosis, and endorsed my advice as to a section. After preparing her for the operation, I removed a large tubo-ovarian cyst from the left side, where I found it completely buried in adhesions. It was filled with blood and pus. The tube and ovary on the right were both diseased. The tube dark, highly inflamed, its fimbrated extremity occluded and adherent to the ovary, which was small and cirrhotic. The tube contained a small quantity of pus. Both tube and ovary were bound to omentum and pelvic peritoneum by moderately firm adhesions. She made an uneventful recovery, and has been able to go about and enjoy life ever since the fourth week after the operation. She has continued to grow stronger, and has had no more of her old attacks of pain, although a year has intervened since she underwent the operation.

LIVER INDIGESTION.

By J. D. MYERS, M. D.,
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Recognizing the fact that the tendency of the age is to run after new ideas, frequently losing sight of the old well established landmarks, I wish to recall to the attention of the profession some old but vital truths. I have discovered no new bacilli or bacteria, but have unearthed some important facts which I beg leave to present.

It is not my intention in this paper to make mention of any of the organic diseases or accidents which may affect the liver, but only that functional trouble known as biliousness, or better, liver indigestion, with its sequelæ. In order to fully understand our subject it will be well to say a few words as to the liver and its functions, although it may seem like repeating an old tale. The liver is the largest, and we may say the most important gland in the body, its size and the importance of its functions being considered. In the mature fœtus, it holds one-fourth or more of the entire volume of blood and is larger than both lungs. At birth the weight of the liver is in proportion to the whole body as one to twenty-eight; in infancy one to twenty, at puberty one to thirty, in adult one to thirty-five, in middle life one to forty, and in old age one to forty-five. These figures give us a fair idea of the important part it plays in

the economy of our system. Up to about the year 1860, the liver was really a great "terra incognita" whose principal office seemed to be to eliminate bile which was "excrementitious" and was the natural purgative; although as far back as Galen, certain maladies when the urine was altered in appearance and reaction, were rightfully attributed to the liver and not the kidneys. Dr. Kirke, in his Physiology published in 1860, although he had made great advances in the analysis of the composition of bile, and recognized in it the presence of glycocholic and taurocholic acids in union with soda, threw no light upon their origin.

Not till 1874 was the three-fold function of the liver demonstrated, which is as follows:

1st. "The formation of glycogen which contributes to the maintenance of animal heat, to the nutrition of the blood and tissues, and the development of white blood corpuscles.

2d. The destructive metamorphosis of albuminoid matter and the formation of urea and other nitrogenous products which are subsequently eliminated by the kidneys, these chemical inter-changes also contributing to the development of animal heat.

3d. The secretion of bile, the greater part of which is reabsorbed, assisting in the assimilation of fats and peptones, and probably in those chemical changes which go on in the liver and portal circulation; while part is excrementitious and in passing along the bowel stimulates peristalsis and arrests decomposition."

This summary brings us well up to our time, and gives in condensed form the results of years of patient investigation. We recognize then, that the liver is the storehouse for our fuel food in the form of glycogen, which is converted into sugar by a ferment, in the liver itself as the needs of the system demand. Hence, we can readily see how any derangement in this glycogenic function of the liver will give us diabetes mellitus. The disorders of the liver, are, however, mainly connected with its second function, that is, the metabolism of albuminoids; we easily recognize its action in the destruction of waste and excessive albuminoids; we know that urea is formed by the liver and not the kidneys, we find that lithiasis is primarily a derangement of the liver, and that it is waste matter in the blood which after a time produces structural changes in the kidneys. We can also see that when oxidation is imperfect, it is the nitrogenous matters that suffer.

What we now wish to reach is the further elaboration of the proteid matters which have been converted into peptones in the stomach. There is no doubt that a further elaboration of peptones goes on in the liver and disturbance of this organ leads to mal-nutrition. It seems just here that the liver has another function, that of arresting certain matters whose presence in the blood would be noxious and allowing nutritive matters to pass on.

It has been demonstrated by experiment that peptones when taken into the general circulation are depressants.

Peptones injected into the veins in small quantities prevent the coagulation of the blood, and in larger quantities produce a depression of the circulation, a soporific condition, complete arrest of secretion by the kidneys, convulsions and death. Thus we see the normal products of digestion are poisons, and if they reach the general circulation in large quantities will produce alarming and dangerous symptoms, as a consequence then, of a disturbance in the workings of the liver, we have not only a badly nourished organism, but one actually poisoned by the presence of these products of digestion. We have both anemia and toxæmia. Is it any wonder then, that nervous depression and irritability always accompany this form of indigestion? We find then, to sum up that there is in the healthy liver both a digestive and a filtering process. We may therefore suffer with that form of indigestion called "biliousness," either from imperfect digestion of the food, or imperfect filtration. In either case the system is ill fed and also poisoned by the absence of certain constituents and the presence of others. We have all seen an acute bilious attack follow free indulgence in rich food, especially in children. Even a small piece of cake may be sufficient to upset the digestion followed by nausea, headache, sometimes vomiting (this gives relief) and sometimes purging. Now these are the facts of the case, but what is the cause? The mother will tell you, "it was the sweets and rich cake; anything with too much sugar or butter always upsets that child." The doctor nods

his head and says, "that child must be watched as to its eating and sweets and fatty food must be interdicted." Now this explanation is wrong, for it is the metabolism of albuminoids in the liver which causes this disturbance, and it is the second function of the liver which is involved, that is, the oxidation of waste and nitrogenized matter. The attack is not due so much to the quality as the quantity of the food ingested and is an old-fashioned subject. More food of the kind has been taken than can be assimilated and the surplus must be gotten rid of in some way. Unless removed by vomiting or purging it must be done by oxidation and we are all familiar with the sudden sharp rise of temperature which accompanies acute indigestion. This is simply a bon-fire kindled by the liver to clear out its overloaded store rooms. A mercurial and a saline and the attack is usually over, although the liver may remain irritable, bringing on a condition commonly called "bilious fever." Now this attack was brought on by eating rich food and was ascribed to the butter and sugar, but it was the metabolism of the albuminoids which caused it. The excess of food caused the excess of bile with the consequent general disturbance. The easily oxidizable hydrocarbons were burnt, leaving the albuminoids to be gotten rid of in any way possible. It is therefore the prevention rather than the treatment of such cases that demands our attention. The capacity and strength of each individual liver should be gauged as accurately as possible. Avoid excess in eating, but don't lay too much stress upon any form of food, for so long as the sugar and fat are alone held responsible, so long will the patient be wrongly fed. Albuminoids will be allowed and hydrocarbons interdicted, and the tendency to biliousness directly fostered.

'Tis said, the happiest man in the world is the one who does not know he has a liver, and this reminds me of a trouble we occasionally meet with, but which is not generally recognized. A congenitally inefficient liver. This requires constant watchfulness and care. As it is not up to the work of a normal liver we must reduce the quantity of food to what it can dispose of. However, the largest eaters are not the healthiest or strongest. 'Tis the amount assimulated, and not that ingested that tells the tale. We will now look briefly at two forms of liver disorder. Biliousness proper, in which the bile acids make the disturbance, and "lithiasis" in which case owing to a derangement of the second function, lithic acid has been formed by the liver. Biliousness is the form of trouble found in persons of "bilious temperament," as it is expressed. They are usually of a dark complexion, with black or dark brown hair, dark eyes with a yellowish tinge of the conjunctiva. They may be active or sluggish, but are possessed of a devil. Appetite capricious, bowels irregular, usually constipated, but have diarrhœa when an attack is passing off. Have frequent and persistent headache, are nervous and irritable and are usually gloomy and morose. The term of Greek derivation, we have adopted for this condition, indicates precisely the cause of this mental depression, "melancholia," which means "black bile." The tongue is usually furred, of a yellowish or brown color and there is a bad taste in the mouth. Sometimes, however; the tongue is clean although the bitter taste is present. Disorder of the bowels is common, there is torpor often accompanied by flatulency, often acidity of the intestines is present, accompanied by a headache peculiarly its own. The stools are pale, more especially so when there are lithiates in the urine, and are offensive. Neuralgia, severe headaches, dimness of vision and vertigo are generally present. All these phenomena are those of excess of bile poisoning the whole system, but chiefly disturbing the digestive tract. The influence of this state upon the animal spirits has been long recognized, and is undoubtedly due to the action of the brain and the liver, and to the lowered blood pressure. Mention has already been made of the depression caused by the presence of albuminoids in the blood vessels. While there may be a great deal of "pure cussedness" in the individual, still irritability of temper is a prominent and almost constant companion of the liver trouble. The late Thos. Carlyle, who "had been there," voiced it thus: "The accursed hag, dyspepsia, had got me butted and bridled, and was ever striving to make my living day a thing of ghastly nightmares. I resisted what I could, never did yield or surrender to her, but she kept my heart right heavy, my battle being sore and hopeless." There is really

very little difference in degree of hurtfulness, between the bile acids and the lithiates. Both are powerful for evil. We must now, however, look at the remoter results of this perverted liver action and its effects upon other organs. It is but repetition to say that a deposit of lithiates in the urine is not due to a morbid condition of the kidneys, but is a sign of functional derangement of the liver, sometimes temporary, sometimes permanent. These lithiates are a product of indigestion. The appearance of lithiates in the urine during the time the liver is engaged in the digestive process, demonstrates the fact that certain peptones instead of being further elaborated in the liver, have been broken up into lithic acid and lithiates. This does not prevent a waste of tissues, but of tissue food as the material which forms this uric acid would under other circumstances have made body tissue. In this same line stands azoturia in which we have an excess of urea. In this we have "excess of urea without diuresis" and excess of urea with diuresis. The first form may be produced by a very slight and almost imperceptible derangement of the assimilative functions, but in the latter, we have the symptoms of a very aggravated form of derangement, accompanied by thirst and morbid craving for food. While this disease is closely allied to diabetes, it is caused by a derangement of the second (not the first) function of the liver. Here we also find "albuminuria," we all know that the presence of albumin in the urine is usually regarded as a certain evidence of disease of the kidneys, we have been taught how to detect it and know that under certain circumstances its presence is ominous of evil, but we know further, that at other times it means nothing. It has been demonstrated that if two or three raw eggs are eaten at once, albumin appears in the urine. Here more albumin has been ingested than can be digested by a healthy liver, so a part simply passes through the liver and is thrown off by the kidneys. Very often the albuminuria is intermittent, albumin being found in the urine passed at night and not in that voided in the morning; in that passed a short time after eating and not in that secreted fasting. We dont pretend to say the liver is at fault in every such case, but it is so frequently, that it is our duty to carefully interrogate it, and we find that many cases of albuminuria (?) are cured when the hepatic disorder has been overcome. We find then that crude albumin may pass unchanged into the general circulation and hence through the kidneys, or the metabolism may take place as an excess of urea, or the albuminoids may be split up into lithic acid, generally combined with ammonia or soda. These conditions may be temporary, the result of acute liver indigestion, or become permanent. In the latter case we will have "renal degeneration as a consequence of the long continued elimination. "Nocturnal asthma" is a result of an excess of nitrogenized waste in the blood. This must not be confounded with the asthma caused by an irritation with swelling of the bronchial mucous membrane. It comes on in sleep, especially after a late heavy meal and is caused by the actual presence in the blood vessels of the lungs of the imperfectly digested food. This is especially the case in persons of a gouty diathesis and an attack is easily excited by particular articles of diet or a spell of indigestion.

Disturbance of the heart' action is very common. There is palpitation, but not that form caused by gas in the stomach or transverse colon. In the latter, the gaseous distention presses the diaphragm up against the heart and mechanically interferes with its action. In the former the palpitation is irregular, accompanied by symptoms of mal-assimilation, waste in the blood, high arterial tension and a badly nourished heart. Sometimes the heart's action is depressed and there may be intermissions with or without fluttering.

Angina pectoris is another common trouble with liver dyspeptics and may prove fatal in advanced life when the heart has become impaired by fatty degeneration. Now, this is not a neuralgia of the heart, but is caused by the spasmodic contractions of the small arteries, excited by the excess of nitrogenized waste in the blood. This causes a high blood pressure in the arteries and may produce either palpitation or angina. This arterial spasm is proven by the hands becoming numb (going to sleep) and the feet cold. Irritable bladder is another consequence. Many cases of so-called inflammation of the neck of the bladder, stricture of the urethra, etc., are the direct result of lithiates in the blood, due to liver indigestion, and can be cured

by restoring the integrity of the liver. Lithic acid irritates the entire urinary tract like fine sand thrown in the eye. Skin affections are common as a result of this blood poisoning.

Upon no tissue does lithic exert a more irritant influence than upon the brain, and, as before mentioned, a temper is developed. Persons naturally mild and even tempered become irritable and peevish when their blood is thus poisoned. Very often there is chronic imsomnia; and after sleep the patient awakes unrefreshed and ready to take offense at nothing. This in brief is a history of the metabolism of albuminoids in the liver, but this condition itself may be a secondary affection produced by derangement of some other organ or function.

Of course, any organic dis-ease of the liver will diminish its digestive and secretive capacity. Disease of the heart, or lungs, by gorging the liver with venous blood may produce this functional disturbance. As has been mentioned the transmutation of the proteids in the liver, assists in the maintenance of animal heat. When the system is in a state of sub-oxidation, the proteids are less able of themselves to generate the heat necessary to complete their nutrition, and instead of tissue food we have lithiates, etc. When the oxygenating process is going on normally in the lungs, this extra supply of heat can be obtained; but when the lungs are diseased the supply of oxygen in the system is diminished, and demands of the liver cannot be complied with, and the second function not being properly performed, we have only impoverished, poisoned blood to nourish and build up an enfeebled body. Suppression of the catamenia and different forms of uterine disease also disturb the workings of the liver. Some of these cases are typical. Dull headache, furred tongue, capricious appetite, constipated bowels, irritable bladders and every symptom of malnutrition. Worry, prolonged mental exercise, or anxiety, not only interfere with the proper secretion of bile, but derange the process of blood-making and oxygenation and induce lithiasis. We are all familiar with these results in the cases of clergymen, students, accountants, etc., who labor with their brains and lead sedentary lives. Before touching upon treatment let me give in a few words the essence of this paper. When food rich in albuminoids is taken in excess of the needs of the system, the excess is split in the liver and it is the disturbance of this function which causes the production of lithic acid and lithiates. Instead of urea we find the liver producing the feebly oxidized and almost insoluble uric acid. A pernicious habit is thus formed which tends to perpetuate itself. The treatment, and this I can only outline briefly must include not only the immediate trouble, but the possible consequenees.

It is not well to resort to mercury as a cholagogue too frequently, as the liver once accustomed to it will not respond to milder stimulants; again, when the kidneys are much impaired the system becomes very intolerant of mercury, and it must be exhibited with great caution. When to give and when to withhold mercury in cases of albuminuria and lithiasis is a question which will frequently puzzle the best physician. In addition to the medicinal treatment is the dietary, and upon it we must lay the greatest stress if we wish to prevent chronic liver indigestion. After what has been said, however, it will not be necessary to go much into detail, if we keep constantly in mind, that alike in biliousness and liver indigestion it is the albuminoids and not the *hydro carbons* which are the *casus belli*. Fruits of all kinds both fresh and cooked are good, provided the stomach which must be consulted first, will tolerate them, and they may be eaten with milk or sugar. The salts in fruit are not in large quantities, but that they are operative, is demonstrative in their anti-scorbutic effects. All vegetables, well cooked, except peas and beans, as these contain a large proportion of casein which is albuminoid. Fish is permissible when plainly cooked and served. Oysters in every style except fried. Fowls may be eaten in fair quantities, but we must not forget that they are rich in albuminoids, especially the dark meat. Pork is simply poison, and veal should be eschewed. Beef is good, but mutton is best. Bread is best eaten cold, but there is no necessity for greater detail. As to drinks, will simply say, that alcohol in any shape is, to put it as mildly as possible, very undesirable, it is a powerful hepatic stimulant, and may be permitted under certain circumstances, but in very limited quantities and well diluted. The habitual use, with

seeming impunity of the so-called table wines simply shows how long suffering and forbearing our livers can be, but the day of reckoning will surely come. In conclusion, allow me to call attention to the great mistake we make in the management of these cases. We too frequently mistake the consequence for the cause and direct all our treatment to the symptoms, losing sight of the fact that our great blood-making-machine is skipping cogs; and when a proper diagnosis is made, we do not prosecute our treatment for a sufficient length of time. A few doses or days of treatment give relief, and we then leave the liver debilitated both by the attack and medication to fight its own battles unaided. In all chronic cases the patients should be kept under medicinal treatment for several months and under dietetic for a year or two. Let me illustrate clinically. In 1871 I was sent home from New York to die; my case could not be diagnosed at first, although I know now I had all the symptoms of liver indigestion in its worst form. The attack culminated in an abscess of the liver, which, adhesion having taken place, discharged into the duodenum. It took about twelve months to make the organic repairs, and ten years to overcome the functional disturbance. During the first two years I took medicine regularly three times a day and don't believe I missed half a dozen doses in that time. For ten years I kept up my diuretic treatment, with medicinal aid at irregular intervals. Had I stopped treatment sooner, I would not be, as I now am, perfectly healthy, with the digestion of an ostrich. Then:

Would'st thou live long and well,
Escape the pangs and pains of hell,
And live a life of joy and ease,
'Bove Galen's diet or Hippocrates'?
Avoid excess of food and drink,
On the welfare of thy body, think;
Guard well that organ—the life giver,
For he lives not well nor long, who *knows* he has a liver.

FUCH'S COLLYRIUM FOR CHRONIC CONJUNCTIVITIS.

℞

Ammonii chloride	0.1	gramme.
Zinci sulphatis	0.25	"
Aquæ destillatæ	40.0	"
M. et add—		
Camphoræ	0.08	"
Dissolved in—		
Spiritus vini diluentis	4.0	"
Croci	0.02	"

Digest for twenty-four hours, stirring frequently. Filter.
Sig.—Eye drops, to be used pure or diluted with equal parts of water.

Communications.

PRINCIPAL RETURNED WITH INTEREST.

P. J. FARNSWORTH, M. D.
CLINTON, IOWA.

Somewhere about the 25th of July ult. a mother held in her hands a five dollar gold piece. She showed it to the little boy of two years and two months who took it quickly and put it in his mouth gave a little gulp and it disappeared.

They consulted the physician at once, who told them not to be apprehensive and repeated the old joke, "If the coin is good it will pass."

They looked for it for two months and then concluded that it was lost. The child's health was good. The mother remembered that he complained of choking occasionally. After breakfast, of bread and milk, October 22d instant, the child gave a little hack or cough and then threw up the five dollars and nothing else.

It had remained in the stomach without inconvenience for three months. There is no doubt of the genuiness of the coin, but instead of "passing" it was "returned."

PERNICIOUS VOMITING OF PREGNANCY.*

By J. G. CECIL, M. D.,
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I have a case to report which is one of considerable interest to me, inasmuch as three or four years ago I read a paper before the Medico-Chirurgical Society of this city, on the subject of pernicious vomiting of pregnancy. At that time I had never seen a fatal case, but since then a fatal case has been reported to that society by Dr. C. Skinner, and I now have one to report myself. The case was one of a young woman perhaps thirty-five years of age, the mother of three children, and in rather delicate health, who became pregnant and almost from the day of her conception, at least as far as she was able to reckon, she commenced to vomit, in spite of any remedy,

*Read before Clinical Society of Louisville, Oct. 4, 1892.

in spite of everything; she went on to her death from the pernicious vomiting of pregnancy—death by starvation. She vomited about eight weeks; I presume from the size of the fœtus pregnancy was not over two and one-half months advanced. I remember at the time I read the paper before the Medico-Chirurgical Society, the position was taken by several of the prominent members of that Society, that inasmuch as these cases were very rare, and, particularly, as they, in their experience, had never met with such a case, under no circumstances (as I remember the trend of their remarks,) would they advocate relief by miscarriage. At that time I tried to defend the position that miscarriage was justifiable, and took the ground that we ought not to go to that extreme, or allow the patient to go to the extreme of the low typhoid condition which precedes death, but after everything else had failed, to induce miscarriage as a last resort, in order to save life. In the case under question, which, by the way, was under the care of another physician, I only having seen the patient on two occasions, once about two weeks before her death, and again the day before death—at the time of my first visit (two weeks prior to her death), her condition was not so serious in my estimation, or in the estimation of my consultant, as to justify miscarriage at that time; in fact, it was not yet ascertained absolutely that she was pregnant. I do not think anyone is able to say positively that a woman is pregnant at two or two and one-half months, but all the evidence pointed to that conclusion. I found that she had a retroverted womb and suspected that she was pregnant, but was not certain. I turned her in the genu-pectoral position and replaced the retroverted womb, endeavoring to hold it in position with a cotton tampon. I advised the doctor to continue this treatment, I was satisfied that the retroversion was the occasion of the persistent vomiting, as is often the case, and in the event that he could not succeed in maintaining the womb in position, then to dilate the cervix with the finger as far as the internal os, but not through it. When I saw the case the second time, the doctor in charge reported that he had not been able to hold the womb in proper position, and had resorted to dilatation of the cervix as far as the internal os, but with no apparent benefit. I then advised immediate miscarriage, which we produced by dilating the canal and internal os, inserting a catheter; the woman, however, was so far advanced toward death, so weak, that miscarriage was not complete at the time of her death; that is, so weak that the uterine muscular fibres were so thoroughly exhausted that the fœtus was never expelled fully during life. I may add that she had had evidences of miscarriage, these evidences having existed all along and we were hoping all the time this would occur spontaneously. The day she died the doctor made an examination and found the fœtus partly expelled from the womb; she sank rapidly and certainly died from this pernicious vomiting, and I want to put this case on record as such. The urine was examined and no evidences of special trouble found. She had a low grade of fever, which during the last week of her life was similar to the last week of typhoid fever. The first time I saw the patient her temperature ranged from 101° to 102°F.

This patient never retained anything taken as food except the white of an egg. She was fed per rectum as long as she could retain anything. The injection soon produced rectal irritation, and could no longer be used. The accomplished obstetrician, DuBois, divides this subject into three stages, very similar to the typhoid condition, and I thoroughly agree with him. He says it is not right nor fair to the patient to wait until the last stage to perform a miscarriage, because, at that time, the patient is so thoroughly exhausted that the shock of miscarriage carries her off. The time he advocates or indicates as proper to induce miscarriage, is during the second stage; that is, when the woman has a decided fever and is unable to retain any nourishment, when every other possible means, therapeutical or local, dilatation of the cervix and everything else has failed. I perfectly agree in this, and believe if miscarriage is brought on at this stage, the chances of recovery are greater than if it is delayed until the last stage, when all the powers are waning.

The attending physician dilated the internal os upon my advice; that is, I believed in going step by step. We frequently have heard of cases, no doubt all of you have, where ulceration of the cervix

associated with persistent vomiting, has been cured by the single application of nitrate of silver solution, where relief has followed the single introduction of the finger into the internal os. I think many of these cases have been benefitted by gradual dilatation of the cervix, that is, step by step, the finger eventually getting to the internal os, as we did in the case under question, at the last moment. My advice to the attending physician was that as long as she was having evidences of a miscarriage, that is, having pains, which seemed to indicate that she might have a miscarriage, possibly any dilatation would excite it, and the least we did the much better her chances would be. I believe that the internal os can be dilated with much advantage in these cases, but I believe also that the risk of miscarriage would be much greater. With the finger you can dilate the os to that extent and probably not bring on a miscarriage, though if the tendency was very strong, I am inclined to think miscarriage would be induced.

COCAINE POISONING.

By J. B. MATTISON, M. D.,
MED. DIRECTOR, BROOKLYN HOME FOR HABITUES.

In November, 1886, at a meeting of the Neurological Society, Dr. Wm. A. Hammond, speaking of cocaine, said, "He did not believe any dose that could be taken was dangerous." This statement—mistaken, misleading and dangerous—was promptly challenged by the writer; and, in two papers—"Cocaine Dosage and Cocaine Addiction," London *Lancet*, May 23, 1887; and "Cocaine Toxæmia," *La Tribune Medicale*, Paris, Jan., 1 1888—seven deaths and 119 less lethal cases from this drug were cited; a record that impelled the *British Medical Journal* to editorially assert "if it were needful to produce more proof of the unsoundness of Dr. Hammond's statement, Dr. Mattison has effectually done this."

In a third paper—"Cocaine Poisoning," Medical and Surgical Reporter, Oct. 24, 1891, covering the record to March, 1891—six more fatal cases and over eighty less toxic were noted, making in all thirteen deaths and nearly two hundred other cases.

In a fourth paper—soon to appear—we shall note those reported from March, 1891, to September, 1892, and among them the one here detailed, for which I am indebted to the courtesy of Dr. G. B. Cushing, House Surgeon of Bellevue Hospital, in whose service it lately occurred.

A. B., strong, healthy man, walked into hospital, suffering from retention of urine. Had clap twelve years ago. During last five years, occasional trouble in urinating. On inserting catheter found a stricture four and a half inches from meatus. To prevent pain and spasm, one drachm of a four per cent. cocaine solution was thrown into urethra, held a half minute, and then allowed to escape. Almost at once, patient became very excited, with largely dilated pupils, and in a few seconds went into violent convulsions, so severe that it required the combined strength of doctor and nurse to hold him on the operating table. Nitrite of amyl was promptly used, but there was not the slightest reaction, and in four minutes the man was dead.

The autopsy revealed nothing abnormal except intense congestion of heart, lungs and brain.

This case emphasizes the need of care in all cases of cocaine anæsthesia, and makes pertinent the reiteration of these conclusions:

1. Cocaine may be toxic.
2. This effect is not rare.
3. There is a lethal dose of cocaine.
4. This dose is uncertain.
5. Dangerous or deadly results may follow doses usually deemed safe.
6. Toxic effects may be sequence of doses large or small, in patients young or old, the feeble or the strong.
7. The danger is greatest when given under the skin.
8. Cardiac or renal weakness increases this risk.
9. Purity of drug will not exempt from the result.
10. Caution is needful under all conditions.
11. Réclus' method, Corning's device, or Esmarch's bandage should be used when injecting.
12. Nitrite of amyl, hypodermic morphia, hypodermic atrea, alcohol, ammonia and caffeine should be at command.

Brooklyn Avenue, Brooklyn.

Society Reports.

THE CLINICAL SOCIETY, OF LOUISVILLE.

Stated Meeting, Oct. 4th, 1892.

THE PRESIDENT, Dr. P. Guntermann, in the chair:

CALCAREOUS DEGENERATION OF A FIBROID TUMOR.

DR. W. H. WATHEN: About two or three months ago a patient was referred to me by Dr. J. M. Mathews, who had been under his care for some time with intense trouble referred to the rectum. Upon thorough examination, he reported that he could find no disease whatever in the rectum, and thought there must be something in the pelvic cavity outside of the rectum that would account for this constant trouble. It seems that this woman had been treated for several years by other physicians, before she came under Dr. Mathews' observation. On examination I found in Douglas' sack a movable tumor, very hard and about the size of a hen egg, which I supposed accounted for all her trouble. I diagnosticated fibroid growth, but its origin I could not make out; in fact, the diagnosis was by no means positive, because I do not believe it possible to make an absolutely correct diagnosis in these cases. The woman was operated on about eight weeks ago, and the specimen that I exhibit to you, removed. There was nothing unusually interesting either in the operation or progress of the case. She made, as she ought to have done, an uninterrupted recovery and has none of the symptoms she complained of before the operation. But my special reason for reporting this case is, that while it is not entirely unique, it is an unusual condition, as may be very easily seen upon examination of the specimen. It is a fibroid growth with calcareous degeneration. Its origin, as you will see, is peculiar; it is in the folds of the broad ligament, and has no connection with the ovary, tube or uterus. There are a few cases of this nature recorded, but they are very rare and probably many laparotomists of large experience have never met with such a case. Dr. Dugan assisted in the operation, and Dr. Mathews was present.

DISCUSSION.

DR. J. A. OUCHTERLONY: What Dr. Wathen has said is very interesting, but there is something left out, which I think is essential to our understanding of the case in all its bearings. He mentioned that the woman had been suffering from trouble, and she was relieved, but he failed entirely to state in what the trouble consisted; what were the symptoms which the presence of this tumor had given rise to.

DR. J. M. MATHEWS: This woman was under my observation for about a year. She complained almost entirely of rectal pain, aggravated or increased during defecation. So well marked was this symptom that I suggested putting her under the effect of an anæsthetic and investigate the rectum, which I did. Chloroform was given her, and divulsing the sphincter I searched the rectum but could not find any well defined ulceration, or indeed inflammation; however, the simple divulsion of the sphincter gave her considerable relief for two or three months. She came to my office several times very much improved, but after the lapse of several months she complained of the same distressing symptoms, which she said had become unbearable. I made another careful examination of the rectum with speculum, but finding nothing I referred her to Dr. Wathen, who made an examination and found this tumor which I had been unable to detect; perhaps had not examined her in the manner or by the method employed by him. It was suggested that an operation was advisable, to which she readily consented, because she said the pain had become unbearable. She was promptly relieved by the operation, and I believe the tumor which you see here, was the cause of all this rectal distress.

DR. W. C. DUGAN: I am rather surprised that it was fibroma; I was under the impression that it was a par-ovarian sarcoma. Am very glad for the patient's sake that it was fibroma.

DR. J. A. OUCHTERLONY: The case reminds me of a post-mortem examination I made a good many years ago, in which there was a double tumor of the broad ligament. The tumor on one side was about as large as the head of a child two years old, on the other it was somewhat smaller. They were ovoid in shape, involving the whole broad ligament; neither ovary could

be distinguished, and both tumors were the seat of calcareous degeneration. The nature of the case had not beem determined during life. This is the only case of calcareous degeneration of neoplasms occurring in the broad ligament that I remember ever having seen, and I believe this condition to be very rare.

VAGINAL DOUCHE AFTER VAGINAL HYSTERECTOMY.

Dr. W. H. Wathen:—This is a uterus removed from a woman forty-four of age. The history of the case is about as follows: For a year preceding the time she applied to me, she had been having a discharge from the vagina of, first a muco-sanguineous character, then a mixture of blood and pus, and finally a well defined hæmorrhage, which, she supposed, was a return of the menstrual function. She had some pain and weight in the pelvis. Her husband, a prominent physician, then examined her and detected what he supposed to be an incipient epithelioma. He treated her by local applications and vaginal douches for six months, when he referred her to me. The hæmorrhage had gradually increased and for three months before she consulted me, it had been almost constant. The posterior cervix was involved, and a portion of the anterior cervix and posterior vaginal walls down to nearly the bottom of Douglas' pouch. She was very anxious to have the organ removed, and her husband insisted upon it. About six or seven weeks ago a vaginal hysterectomy was done. I neglected to say that the womb was completely retroverted, lying upon the rectum, but it was not adherent. The only apprehension I had in the removal of the womb was the difficulty in getting far enough back to go behind the malignant growth and not invade the rectum. The womb was removed without any especial trouble and no untoward symptom worth relating developed in the history of the case, until on the morning of the fifteenth day. Her regular nurse had been dispensed with on the fourteenth day; the nurse attending the convalescing patients at the infirmary took charge of the case, and, as is her custom, with a desire to preserve cleanliness, she gave a vaginal douche of about as much or more than a quart of bichloride of mercury solution 1 to 1000 or 1 to 2000. Very little of the water returned, but the nurse continued to inject it all. The woman began to suffer intense pain. The nurse thinking that possibly the solution was too strong, injected some water without any bichloride in it. how much I do not know; she said about a quart, she thought, and very little of that returned. I was telephoned that the woman was suffering intensely and sent my nurse at once who telephoned the condition, and gave the patient a hypodermatic injection of morphine. I saw the patient in an hour and the water was flowing from the vagina, keeping everything wet; about every five or ten minutes she would have quite severe labor-like pains, when the water would gush from the vagina, showing that it had been forced into the peritoneal cavity. She suffered so much that it required one-fourth grain of morphine about every three hours until the next day, when the pains gradually grew less but continued for probably three days before she was entirely relieved. I observed the next morning that she was passing no urine, and upon introducing a catheter into the bladder, only a dram or so came away. The nurse informed me that evidently the character of the water then was practically urine. The catheter was retained and part of the urine escaped through it at first, gradually increasing until at the end of ten days it all passed through the catheter, the wound in the bladder and in the peritoneal cavity having closed. I report this case to emphasize my position expressed three years ago before the meeting of the American Association of Obstetricians and Gynæcologists, that vaginal douches following vaginal hysterectomy are practically of no advantage, and may result in serious injury by forcing the solution, bichloride or what not, and necrosed tissue, into the peritoneal cavity. I was severely taken to task then, others claiming that water injected into the vagina would always run out; but here is a practical demonstration that it went into the peritoneal cavity. I was surprised that the solution of bichloride should have caused so little trouble, because it must have come in contact with a considerable portion of the peritoneum, and organs of the pelvis. I received a letter from her husband about a week ago; he says she is doing well and retains her urine for nine hours.

I would like to call attention to one

other point: About a year and a half ago, I lost a patient from vaginal hysterectomy, caused I am sure by the neglect of a precaution I now take. It was evidently caused by failure to remove by curetting all the infected tissue. Everything used in the operation, and the entire cavity should be thoroughly sterilized; every suspicious particle of tissue carefully scraped away, the cavity thoroughly washed with bichloride solution and tamponed with iodoform gauze. I think that many deaths from vaginal hysterectomy have resulted because of failure to carefully cleanse and scrape away all the infected tissue, thereby admitting the poisonous germs into the the peritoneal cavity.

DISCUSSION.

Dr. W. C. Dugan: Concerning the occurrence of malignant growths, or malignant diseases in young persons, I saw a patient a short time ago, aged twenty-two years, who was suffering with a peculiar ulceration of the cervix; suspecting malignancy, I cut out some tissue and gave it to a microscopist for examination, and he pronounced it unquestionably malignant.

Dr. J. M. Mathews: In regard to the point made by Dr. Dugan, I wish to state that I lost a young lady patient, eighteen years of age, with malignant trouble of the rectum, and a young boy, seventeen years of age, of the same trouble.

Dr. A. M. Vance: I would like to mention a case I saw recently at the Johns-Hopkins Hospital, operated upon by Dr. Kelly by vaginal-hysterectomy. The operation was quite successful, and the woman made a good recovery. At the time I saw the patient he was very much surprised to discover in the vault of the vagina a mass of protruding tissue. Upon investigation he became convinced that it was omental hernia, which was easily removed by galvanic-cautery, only a very small pedicle being present. The tumor protruding was about the size of an English walnut. This shows that the opening remained some little time after vaginal-hysterectomy.

Dr. J. G. Cecil: In this connection, I want to report a case that I saw once which was operated on by Marcy, and in which there was complete closure of the opening, and the trouble had recurred in the cicatrix. Another case I remember was operated on by Price, in which there never was a closure of the opening through the vault, but in the last case there was a recurrence of the trouble probably within six weeks or two months. The opening never did close yet there was no trouble resulting from the vaginal-douches, that is, no such trouble as Dr. Wathen experienced in his case.

Dr. W. C. Dugan: Did you not attribute the trouble of non-union to malignant growth which was not wholly removed?

Dr. J. G. Cecil: We thought failure of the opening to close was due to early recurrence of the malignant trouble.

Dr. A. M. Vance: In the case referred to by me, operated upon by Dr. Kelly, the mucous-membrane coming up to this little mass, was perfectly soft and gave no evidence of infiltration, nor was there any in the mass after removal. The pedicle was about one-quarter of an inch in diameter.

Dr. W. H. Wathen: The trouble in this case was evidently due to the fact that in operating, the vaginal-vault was left open, and the omentum immediately slipped in, blocking and preventing its closure. I would like to ask if ligatures were used in the operation.

Dr. A. M. Vance: The operation was done with ligatures, some of which were still on.

UREMIA CAUSED BY MALIGNANT TUMOR.

Dr. J. A. Ouchterlony: I will mention a somewhat unusual case that came under my observation. A lady past middle age, who had several years ago ceased menstruating, noticed the latter part of last year a sanguineous discharge per vaginam, which disturbed her considerably. At first she thought it was a return of menstruation, but it occurred at irregular intervals and she suffered some discomfort in the lower part of the abdomen, not very definitely located. At last she consulted me; I examined her and found an epithelioma of the cervix and upper part of the vagina, so extensive in its implication of the surrounding tissues, that I did not think an operation was at all likely to prove servicable. I treated her with astringent washes, etc.; in the course of

time she began to suffer more pain, which became so intense that I put her on small doses of codeia, repeated several times during the twenty-four hours. This kept her comfortable, and the washes did away with the unpleasant discharge and she got along very nicely. I told the family the nature of her trouble, and this summer the question was agitated by some of her relatives whether something could not be done. A friend of mine saw her with me, and agreed that it was not a case for operation. I went away on my vacation and in the meantime she had to increase the dose of codeia so that she took about one and one-half grains three or four times a day. When I returned early in September, I found her at home after a sojourn in the west, looking better and having become stronger. After I had been at home a week or so, I was sent for one day, and she informed me that she was unable to pass water. I gave her a diuretic, which produced no impression at all; then I introduced a catheter and got nothing but some sanguineous, milky fluid. I employed a silver catheter which could be moved around, using as a probe, and found that the posterior walls of the bladder had become involved in the malignant processes, and was almost completely filled with this epithelial mass. She was suffering from nausea, and could retain nothing; I gave her some wine of cocaine which seemed to relieve the nausea, and she took a little nourishment, but the urinary function was never re-established, and she died after two weeks, in which time she had never passed any water at all; some fluid perhaps amounting to a tablespoonful escaped per urethra in the course of each twenty-four hours. While this was going on there was a soft fluctuating tumor developing in the right flank. My diagnosis of the case was as follows: "Malignant processes involving the orifice of the ureters, preventing the entrance of the urine into the bladder," and for that reason she was enabled to live so long without passing any water. She had a few convulsions, and all of a sudden one evening she had a severe convulsion and was gone.

I do not remember every having seen exactly the counterpart of this case; it interested me a great deal. It is an unusual way for malignant disease of the uterus to terminate.

DISCUSSION.

Dr. T. P. Satterwhite: I believe it is common for malignant troubles to cause uremic poisoning.

Dr. J. A. Ouchterlony: Why should there be uremia in malignant disease of the uterus, unless the disease involves the kidneys?

Dr. T. P. Satterwhite: I have seen two cases of malignant trouble of the mammary glands, both patients dying of uremic poisoning.

CANCER AND LIFE INSURANCE.

Dr. J. G. Cecil: The case reported by Dr. Ouchterlony is certainly a very rare one as far as my observation goes, in the manner of its termination. I have often wondered why it was we see extensive disease involving the anterior vaginal walls, and that the ureters so frequently and so generally escape. This case of cancer recalls to my mind one of some importance from an insurance standpoint, which came into my knowledge recently. A woman down town was examined by two gentlemen for life insurance, and she gave as far as the reports went, a clear history with the exception that she did not give any history of malignant growth; but it was afterwards learned that she had had a small growth taken from the alæ of the nose, which had been diagnosticated by an irregular as cancer, some two or three years previous. She passed the examination into a company which is reasonably rigid, I think, for three thousand dollars, and a short time afterward, within a week or two at least, she had a hæmorrhage, and sent for Dr. Turner Anderson, who went to the house and found the woman out in the garden working about the flowers or vegetables. The doctor asked her if anyone was sick, and she said no, and he told her he had been summoned to that house; she replied that perhaps it was herself, as she had had some little hæmorrhage and wanted to know about that. He made an examination and detected very easily an extensive carcinoma of the cervix. She was past the menopause, probably fifty-five years of age. The next day after the examination, I believe, a friend of hers, relative, perhaps, came to Dr. Anderson and asked him what he had learned by his investigation. Dr. Anderson told the party he had learned that the woman had

a cancer. This lady was informed of the fact that she had a cancer, whereupon she laid down and died. She died within a week or ten days from the date of Dr. Anderson's examination. The question that is agitating the insurance company is whether they will have to pay the policy or not. I do not know exactly how she died, but the method of her death as related by the physician in attendance would seem to indicate acute peritonitis.

DISCUSSION.

Dr. A. M. Vance: I remember the case of a young medical student, where a tuberculosis process closed the ureters, and the patient died in a short time with convulsions. No hydro-nephrosis developed, and he died in three days after suppression had commenced. The process commenced in the testicles and went from that to prostate, thence to the bladder walls, shutting off the ureters.

Dr. J. M. Mathews: The point made by Dr. Cecil is an important one in relation to life insurance. Five years ago I read a paper before the State Medical Society, of Kentucky, on the subject of the importance of rectal examinations by life insurance examiners. In that paper I cited five cases, one of which I wish to mention briefly: A gentleman was referred to me by Dr. Leachman, for some inflammation of the rectum, supposed to be piles, I made an examination with my finger and detected quite a large nodule. I asked the gentleman to bring Dr. Leachman with him to my office; after a delay of about a week the Doctor came with him. I had the Doctor touch this nodule, which was about three to three and one-half inches up the rectum, saying that I thought it was malignant. At that time the Doctor hardly thought so, as the man appeared to be in excellent health. The man was given comparatively little treatment; I gave him an injection, and he said he felt improved. He then left for a long trip west and was absent several months. On his return he came to my office, stating that he was positively relieved had no trouble at all. I examined the rectum and found ulceration considerably increased. He then left my office and made application to one of the life insurance companies for a ten thousand dollar policy, and was accepted. The growth rapidly extended and in less than six months from that time the man was dead, evidently from perforation caused by cancerous growth. This growth could be detected by simply passing the finger in the rectum, and if the examiner for life insurance had done this, it would have saved the company ten thousand dollars. It is my experience that these growths occur in the rectum often without any pain at all; that the rectum may be almost closed by the growth without causing pain; and, that they can be easily detected simply by an examination with the finger, without the aid of a speculum.

Dr. W. H. Wathen: The case referred to by Dr. Ouchterlony is unusually interesting, and, as far as my experience goes, entirely unique. I think I have seen relatively more cases of cancer of the womb than of any other disease, and have never known a case resulting as he has described. You seldom find the ureters obstructed; the flow of urine constantly coming away, the pressure from behind forcing it through, prevents the passage becoming obstructed; but in this instance doubtless something encouraged the rapid growth of the cancer, which obstructed nearly the entire flow. From the explanation given by Dr. Ouchterlony I feel sure the uremia was due to the obstructed ureters. I have never observed any relation between cancer and kidney complication, and do not see why there should be any, unless the kidneys or the ureters are involved in the cancerous growth.

Concerning Dr. Cecil's inquiry as to the part cancerous disease of the uterus assumes toward life insurance, I think this is quite an important matter, but one however, that will probably never be fully and practically appreciated, for the reason, that women generally will not complain to insurance examiners of any symptom that would indicate a disease of this nature. It has probably been the experience of all of us in the treatment of cancer of the womb, that patients do not apply for examination until the disease has progressed beyond operative means. I think nine-tenths of the patients, if not nineteen-twentieths, that have consulted me, have gone so far that an operation could not be performed. Many of these I have examined when they had complained but little, and had not suspected malignant disease.

Dr. W. C. Dugan: I remember a few

years ago hearing Thomas make the statement that the return of menstrual flow after the menopause usually meant malignancy, and in such cases the patients should be subjected to careful examination at once. This clinical fact, I am convinced, is not generally appreciated.

Dr. J. A. Ouchterlony: I have read of a number of cases where there was a return of the flow, which continued with perfect regularity for a considerable length of times in which there was no malignancy.

Of course such cases are rare, but they do sometimes occur.

Dr. T. P. Satterwhite: I wish to state in connection with Dr. Mathews' remarks, not long ago I was called to see a lady about seventy years of age, the very picture of health. She said she had some little trouble with constipation, for which I prescribed saline waters. She sent for me again in two or three weeks; I examined her rectum and found it was nearly closed; as well as I could judge from my index finger, I do not think the opening through the stricture was larger than one-quarter of an inch, and she was as healthy and robust a looking woman as I ever saw.

PERNICIOUS VOMITING OF PREGNANCY.

Dr. J. G. Cecil: (See page 726)

DISCUSSION.

Dr. W. H. Wathen: I am opposed to the induction of miscarriage in cases of this character, but I feel that we may be justified in resorting to means that may bring on miscarriage, not for the purpose of bringing it on but for the relief of the nausea. I should not hesitate where I had a patient that had resisted all other means, whether she might be threatened with miscarriage or not, to gradually and carefully with my finger, dilate the entire canal to a limited degree. Sometimes the dilatation in a case of threatened miscarriage might have a soothing effect by relieving the irritation within the cervical canal. There are some instances where dilatation has resulted very rapidly in miscarriage; in others where it does not result in it at all. I have seen the neck dilated to the extent of a half dollar in a woman pregnant fourt and one-half months, and the sound in roduced several times between the membranes and the walls, not bringing on a symptom of miscarriage. The physician who did this contended that the pregnancy was extra-uterine, because he had introduced the sound without producing miscarriage. I introduced my finger and found the head of the child easily within the membranes. She went on to full term.

I have found a number of cases where a properly adjusted pessary has been the means of preventing miscarriage in retroverted wombs.

GONORRHEA.

Dr. John A. Wyeth, in a clinical lecture at the New York Polyclinic, said: My idea about gonorrhea is that we should treat it just as we do an acute abscess: that is, by drainage, with just as much asepsis as possible. Let the urethra hang downward, with a bag of some sort loosely attached to it to catch the discharge. Do not have it tightly bandaged or plugged up with cotton. In a specific urethritis, where the inflammation has extended into the deeper layers of the epithelium, the various bichloride and zinc injections are not likely to do much good. In an ordinary non-specific urethritis, however, where the inflammation is superficial, you can inject with good results. There are certain remedies which will increase the amount of urine and render it aseptic, so that you can use the bladder as an irrigator in gonorrheal inflammation. Among these remedies is boracic acid, or better still, the oil of gaultheria. This drug will absolutely sterilize the urine. You can give five or six drops every three or four hours. During the later stages of inflammation, mild solutions of the sub-acetate of lead can be used, which will help keep the urethra clean. A syringe with a short nozzle should be employed so as to only just enter the meatus. The injection should be of moderate size, so as not to over-distend the urethra. During the acute stages I instruct my patient to take a warm sitzbath night and morning. When the acute stage has subsided the administration of some of the so-called blennorrhetics will be found beneficial.

I have found the capsules containing Santal-midy, a preparation made from sandal-wood, a very good thing. I consider these superior to the old-time cubeb preparations, which are liable to disturb digestion.—*Indiana Med. Journal.*

Bacteriological Notes.*

A Method for Obtaining pure Cultures of Tubercle Bacilli from Sputum:—Dr. E. Pastor (*Centralblatt f. Bakteriologie u. Parasitenkunde*, xi, 1892 p. 233) has announced a method for obtaining pure cultures of tubercle bacillus from the sputum. He selects sputum which contains a very large number of bacilli and comparatively few other bacteria. The patient is then made to wash out his mouth repeatedly with sterilized water after which he expectorates in a sterile dish. This sputum is emulsified by shaking it up with sterile water and any coarse particles filtered off with fine gauze. A few drops of the filtrate are added to tubes of liquid gelatine (10 per cent.), thoroughly mixed with it after which it is poured out on plates. These are properly covered and left at the temperature of the room. In the course of a few days the other bacteria, present in the filtrate, develop colonies. By means of a hand lens areas can be found on the plate which are free from colonies. These are removed by means of sterile instruments and tubes of inclined blood serum inoculated with them. These are kept at the body temperature in an incubator. The author always obtained as many as one, (frequently more) cultures of the tubercle bacillus out of a series of ten inoculations. Many of the tubes became contaminated owing to the non-development of certain bacteria at the ordinary temperature. Better results were obtained from the fluid in the cavities of phthisical lungs which as would be expected contain more tubercle bacilli and less impurites than the sputum.

Appearance and Spread of Microorganisms in the Alimentary Canal of Animals:—Popoff (*Wratsch, 1891, No. 39.*) examined bacteriologically the meconium of calves and the contents of the intestinal canal of newly born cats and dogs. In the latter case some of the animals had been suckled, others had not. The conclusion reached was that the meconium contains under physiological conditions neither ærobic or anærobic bacteria but it afforded a good medium for the development of bacteria that might be introduced. The time of the appearance and spread of the bacteria depends entirely on the milk. The only way by which bacteria can enter the intestinal canal is by the mouth. Bacteria can be demonstrated in the meconium twenty-four hours after birth.

Brienstock maintained that bacteria would not be found in the meconial feces of children fed only on milk. Echerich however discovered bacteria in the rectal contents in from four to eighteen hours after birth. In the light of their former experiments the results of Popoff are of considerable importance.

A Pus-Producing Bacillus Obtained from Earth.—Dr. Bolton (*The American Journal of the Medical Sciences, ciii, 1892, p. 673*) described a bacillus which he isolated from earth by inoculating rats. The bacillus resembled morphologically the bacillus of diphtheria. Many of them are bent and narrower throughout the middle than at the extremities. It does not take the Gram stain. It develops most vigorously in a slightly acid medium. In rats, gray mice, rabbits and usually in white mice a subcutaneous inoculation with a small quantity of a pure culture produced an abscess confined strictly to the seat of inoculation. The injection of .5 cc of liquid cultures in the veins of rabbits produced in some cases multiple abscesses, especially in the joints and kidneys. Subcutaneous inoculations produced in one case abscesses of the joints in a white mouse. The abscesses developed very rapidly after the inoculation, but suppuration ceased as soon as they were opened. The animals appeared to suffer no other inconvenience. The bacteria were found aggregated in small and larger irregular clumps in the pus many of them lying in the pus-corpuscles. Metastatic abscesses were formed only when the bacteria were injected into the circulation otherwise the abscess remained strictly confined to the seat of inoculation in rabbits, white rats and gray mice.

In the same article the author gives an interesting account of the cultivation of tetanus bacilli. He obtained pure cultures of these bacteria from different specimens of soil and also from a case of human tetanus by the use of Kitasato's method.

*Translated for The Medical and Surgical Reporter.

Abstracts.

ACTUAL, NOT TEXT-BOOK, EXPERIENCE WITH CASES OF ECTOPIC GESTATION.*

By DR. JAMES F. W. ROSS,
TORONTO.

After showing the want of reliability of text-book lore, since they for the most lack that knowledge gained by actual experience and hence are given to lead the student astray, the author credits the pioneer work of Lawson Tait coupled with his teachings, to have been the means of saving several hundreds of lives. Ross confines himself entirely within the realm of his own personal experience and sets forth many instructive facts, well to be borne in mind by the general practitioner so the patient in question may receive prompt surgical assistance.

History.—(*a*) *Sterility*: "Which becomes the cause of fertilization of the ovum and its non-removal from the tube," he explains by the fact that "many of these patients contract gonorrhœa soon after marriage, but to a minor degree; the ciliated epithelium is shed, and the tube is functionally imperfect." (*b*) *Supposed miscarriage*: Experience shows that uterine bleeding may occur when a pus-tube or ovarian cyst is present, can only be relied on if the decidua is found. (*c*) *Pain*: Of great importance. The woman has been practically a well woman until it set in, no evidence or history of recent gonorrhœa, no miscarriage, no intermittent attacks of inflammation, but while progressing well, though barren, she suddenly, in the midst of health becomes an ill woman. Ectopic gestation is the only disease that will produce this condition.

Digital examination may be puzzling in that the condition feels neither like a pus tube or cystic ovary, too soft for a fibroid with a pedicle, too hard and too movable for a hydrosalpinx, that takes some eccentric position between uterus and bladder, and simulates that disease of the ancients, "pelvic cellulitis." A guess of ectopic gestation will probably be correct.

Rupture of an ectopic gestation may or may not give rise to symptoms; a woman may be going round with blood in her abdomen without showing any definite signs of its presence; and yet *peritonitis* may supervene at any moment. This is shown by an elevation of temperature and pulse, and calls for immediate surgical interference, otherwise the patient's life will be sacrificed. Hematocele is nearly always connected with ruptured tubal pregnancy, to substantiate this the author showed a specimen of an enormous suppurating hematocele, the fetal sac was almost overlooked, lying as it did, high up among the intestines. The author reported seven cases with six recoveries, results which amply justify his conclusions. "In all cases of obscure miscarriage with a doubt as to the previous abortion, with a mass in the pelvis and unaccountable pains, a consultation should be called before the patient lapses into a critical condition. An operation should then be performed, partly exploratory and wholly curative."

*Read before the Medical Society of the County of Erie, Buffalo, June 14, 1892.

THE TREATMENT OF OBSTINATE HICCOUGH.

It is doubtless perfectly true that the treatment of hiccough has not received much notice at the hands of the writers of text-books in this country. But the reason of this probably is that the symptom seldom attains to any serious proportions in this part of the world, so as to call for relief by the medical man in attendance. When, however, hiccough acquires an obstinate persistency, for the relief of which therapeutic aid is urgently needed, difficulties may be met with. A case in point is recorded in an Indian contemporary, where a retired officer aged 76, who had been suffering from acute congestion of the liver became affected with obstinate hiccough, which set in as a most alarming and distressing symptom. Everything was tried in the way of drug treatment which could be suggested, but without avail. One day, however, some beef tea was taken, which incidentally caused the patient to vomit. For a time, in consequence of this, the hiccough was relieved; whereupon the practitioner determined to try an injection of apomorphine, and the result was that vomiting was produced, and the hiccough ceased permanently. Altogether the symptoms persisted incessantly for seventy-two hours, and caused much distress to the patient. Physostigma has been recommended as useful in these cases.—*Med. Press.*

THE RELATION OF THE SO-CALLED MINOR GYNÆCOLOGICAL OPERATIONS TO INTRA-PELVIC INFLAMMATION.

L. S. McMURTRY, M. D.,
LOUISVILLE, KY.

The author calls attention to the advance of civilization, the departure from simple habits of agricultural life, the accumulating influx of European pauper population and an increase of vice, as augmenting the prevalence of specific inflammatory disease of the pelvic organs. The ready infection of the intra-peritoneal structures during an unprotected labor or puerperium, as a conspicuous cause of intra-pelvic inflammatory disease.

Under the head of *pernicious effects of unnecessary examinations*, he states that not every woman with pain in back and head at menstrual period should be regarded as a subject of uterine or ovarian disease, salines, hot sitz baths and rest generally giving relief. Opium is decidedly contraindicated and dangerous. The author recognizes mechanical dysmenorrhœa either from cervical stenosis or imperforate hymen, but claims their proportion to be limited, and when local examination becomes necessary in the unmarried, she should be anæsthetized. The sound he denounces as a bearer of infection, and a means by which the uterine walls have been punctured, hence dangerous and useless.

Under the *use of caustics and chemical solutions*, the doctor speaks truly and feelingly: "I could recite here case after case from my own practice, showing beyond question that mild forms of pelvic inflammation have been converted into serious and acute grades by this treatment, and that disease of the tubes and ovaries dated its activity from the time such treatment was instituted." He therefore endorses Emmet's teachings on the evils of intra-uterine medication.

Dilatation of the cervix uteri resorted to by some for sterility, dysmemorrhœa, on the assumed diagnosis of stenosis of the cervical canal. 1. Sponge or tupelo tents, often within twenty-four hours give rise to elevation of pulse and temperature and the patient has an attack of pelvic peritonitis and its sequelæ of chronic inflamed appendages. 2. Graduated hard rubber dilators, produce a traumatism which may extend itself readily through communicating channels to the peritoneum. 3. Steel dilators most often used, have been erroneously credited with curing menstrual disorders and nervous disturbances associated therewith; and have no place in nervous dysmenorrhœa,—the author recognizes the necessity for dilatation of the cervical canal, by a gentle hand under asepsis as a preparatory step in the removal of pathological growths from the uterine cavity, but feels the indiscriminate and persistent use of dilatation is a common and prolific cause of disease of the uterine appendages.

Indiscriminate Trachelorrhaphy. The operation, one of the most appropriate and efficient in deeply torn ulcerating cervices, has been widely abused in having been performed for every variety of pelvic disease and almost every form of nervous disorder. It has unfortunately been also done in cases of unrecognized intra-pelvic inflammations or the lack of proper precautions and aseptic methods have given rise to more serious conditions than the operation was undertaken for.

The routine use of the curette. Its usefulness in the removal of fungous growths from the endometrium, or removing all kinds of detritus from the interior of the uterus, has long been recognized. Its use in simple endometritis (a rare disease) is questionable, results often showing an aggravation of intra-pelvic disease.

In conclusion the author presents the following summary: 1st. Etiology of intra-pelvic inflammation (salpingitis, ovaritis, and peritonitis) may be therefore: (1) puerperal; (2) specific (3) post-operative (traumatic).

2. Unnecessary and uncleanly examinations, with introduction of the sound, may cause by traumatism and infection, pelvic inflammation.

3d. Forcible dilatation, with steel instruments, sponge tents and other instruments, may beget intrapelvic inflammatory disease. This operation has a very narrow sphere of utility, and is usually performed upon erroneous pathological data.

4th. Operations on the cervix with associated disease of the appendages is dan-

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gerous. The treatment of lacerations by caustics and astringents is never satisfactory and always dangerous. Trachelorraphy is an operation of high utility, but requires discrimination in application and skill in execution in order to obtain good results. It is often the initial step in tubo-ovarian disease of severe type.

5th. Curettement, while of unquestioned value in removing neoplasms and detritus from the endometrium, is abused as a method of treating inflammatory conditions of the pelvic organs. The curette is an instrument capable of causing extensive lesions, that may light up an inflammation extending to the appendages and peritoneum, or aggravate a pre-existing inflammation therein.

THE NATURAL HISTORY OF PELVIC INFLAMMATIONS.

By JOSEPH PRICE, M. D.,
PHILADELPHIA.

The author begins with the pregnant remark that all affections should be studied from the clinical and symptomatic standpoint, this should be reinforced or corrected by such pathological data presentingthemselves along the line of investigation.

The various forms of pelvic disease studied from this standpoint have enabled the author to assert definitely that in his experience he has never met with a broad ligament abscess; in the most purulent inflammation discoverable in the broad ligament, in tubal and ovarian disease, he has always found the ligament intact. It might be often folded on itself, glued together, and apparently fused with the abscess cavity, but careful dissection would free it, and the ligament, except for inflammatory cloudiness due to adhesions, was in no way attacked by the pus deposit; he states further that "this is the invariable rule when removal is made *in toto*. This is why almost without exception all these pelvic tumors are removable. The broad ligament is the swing upon which is held the inflammatory neoplasm, and when intestinal and omental adhesions are loosed, the whole deposit may be lifted out and removed."

The conclusions drawn from the above facts, are, that almost without exception the *sources of inflammation come from the outside.* Its natural passage is through the uterus, along the tubes where it is likely to stop since the fimbriated end is prone to glue up, but this often happens only after the ovary has been infected thus giving rise to the ovarian abscess and its possible subsequent complications. The causes for pelvic inflammation may be natural or artifical—referring to the latter he states: "*I am sure that many women are treated into pelvic disease,*" and cautions about the use of the improper use of the vaginal douche, viz; during the menstrual period, or used at any time with great force, the danger being the occurrence of possible traumatic inflammation; the use of the sound and intra-uterine application, etc., are mentioned as other causes.

Under the head of natural causes, are gonorrhœa, badly-handled labors and abortions, and the accidents to menstruation, those belonging to this latter class could be avoided, if proper instruction regarding necessary care during menstruation, attention to proper hygiene and the ruder forms of exercise and the fatigue of the ball-room.

The exact history of previous pregnancies, abortions and labors, their management, excessive douching at the puerperal period with excessively strong irritating solutions, the use of instruments at labor, the after-history in reference to discharges, retained placenta and long-continued bleeding are all competent to produce trouble along the channels already designated; he further states that, "the diagnosis, apart from history, must rest upon digital examination. The presence of lateral masses in the pelvis, our old cellulitic deposit, must give us our point of inquiry. First the uterus should be differentiated, after which, taking this as the objective point, all other relations are to be decided,—the ovarian abscess and its subsequent complications."

Among the causes of pelvic inflammations he enumerated: The presence of a well-defined groove between the lateral masses and the uterus, points invariably to pelvic inflammatory deposit in the tubes and ovaries. The patient may

*Read before the Med. Soc. of the County of Erie.

suffer intensely on one side, and the disease be present on the other, hence, both sides should be examined.

Again, there may be exceedingly marked disease, and the ovarian and tubal complications small. Here it is well to remember that intestinal complications are often at the bottom of the size of the tumor, so that when adhesions are all freed, the mass that is to be removed is insignificant in its appearance, though examination by floating the mass will disclose the multiplicity of the adhesions and their density. Tubercular variety of inflammation is often puzzling and should receive careful attention.

In all forms of inflammation under consideration, the tendency is toward deposits in multiple locations. This is due both to inflammatory strictures in the tube and to the different structures encountered in the inflammatory process. Hence it is necessary to deal with all pelvic deposits as we know they must exist anatomically, taking into consideration their cause and the structures involved, and not treat them as hypothetical quantities under uncertain processes. If we consider the suppurating, inflamed tube as an offending organ, quite as much as the retained placenta, we cannot go astray in its treatment. It is just as logical to treat the remaining *débris* of labor as a benign and inoffensive residue, as to look at this internal disease as harmless; indeed, it is much more rational, for the one has some chance of escape, the other none.

ON THE TORSION OF ARTERIES.

In connection with operations for excision of tumors, and other excisions of a like character, Jonathan Hutchinson remarks as follows: "I may mention that for many years I have quite ceased to use any other means for the arrest of arterial bleeding than torsion. In excision of the breast, for instance, I do not think that I have during the last fifteen years ever used a ligature. The torsion is always effected by a pair of Well's clamp forceps, now in such universal employment. I am always extremely careful to close all vessels, keeping the wound exposed for a considerable time for that purpose. Very seldom, indeed, have I encountered any secondary hemorrhage." —*Columbus Med. Jour.*

PLAIN TALKS ABOUT EARLY DIAGNOSIS, AND EARLY OPERATION IN CERTAIN INTRA-PELVIC DISEASES OF WOMEN.*

By CHAS. A. L. REED, M. D.,
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The author opens this subject with the important remark that, "the chief cause of mortality in abdominal and pelvic surgery may be epitomized in the word 'delay.'" The patients themselves may be often to blame, either through undue modesty or fear instilled by friends or physicians who misapprehend the true status of pelvic surgery. What is needed to remedy this evil is to have the actual results of special workers in this field of surgery published and republished, until the general profession begins to comprehend what can be done for the relief of their unfortunate patients. It should be held up that the mortality of abdominal section in skilled hands is under three per cent, and that with all operators, results improve just in proportion as they get their cases early and as their experience increases. The doctor further emphasizes that he insists upon examination only in the presence of persistent symptoms pointing to disease in the pelvis; the word "persistent" being significant in that it implies that the conservative measures of treatment have first been tried; he does not operate upon twenty-five per cent. of the cases that come to him for that purpose, and never selects cases. He feels certain his colleagues are equally discriminating.

In making examinations he does not agree with the writer in Mann's system of gynæcology, that inspection of the external genitalia is as indelicate as unnecessary, and should never be practiced in the absence of some special indication. He condemns the Fergusson's cylindrical speculum, blaming the tortures induced by this instrument, for some cases never passing beyond their first examination. The sound, to-day the opprobrium of the gynecic outfit, often produces great mischief, never aids in diagnosis should be discarded entirely. All grotesque and

*Read before the Med. Soc. of Erie County, June 14, 1892.

needless postures frequently pictured in the books are condemned.

For an operator of experience, whose touch is cultured, it is not necessary to place the patient in any other than the recumbent posture with knees flexed. A speculum has no place in the diagnosis of conditions above the pelvic diaphragm; instrumental examination of the uterine cavity is always hazardous; should be employed only in exceptional cases, and then only under the most scrupulous asceptic precautions.

Tumefaction above either fornix with or without fixation, generally means irreparable organic mischief, which, if not already furnishing a nidus for pus, offers at least an inviting field for suppuration. When this condition exists in connection with a history of previous miscarriages, dirty accouchements, intrauterine thickenings, and electrical treatments, but particularly when a distinct history is given of one or more attacks of pelvic peritonitis, which, however, may not have been of a severe type, the conclusion is simply irresistible that the case belongs in the surgical category, and that operation should be advised and practiced at the earliest possible moment.

RETENTION TUMORS.

Retention tumors in the abdomen formed the subject of some remarks by Jonathan Hutchinson in the *Archives of Surgery*. He described several cases of remarkable retention of fæces in children and stated that this condition is the common cause of pot belly. There is no obvious retention in these cases he says, the bowels perhaps moving regularly or even incontinently, producing precisely the same condition of things which, when it occurs to the bladder, is described as "retention with incontinence." He says that he once tapped a woman's belly and drew off urine where he evidently expected to find ascites. For the recognition of abdominal retention tumors he offers the following memoranda:

(1) The distension, although enormous, is usually quite painless.

(2) The retention is never absolute, but only residual. There is always overflow.

(3) The patient never assists the surgeon, but rather misleads him, insisting that there is free relief of bowels and bladder.—*Lancet.*

THE PRACTITIONER'S ANATOMY OF THE RESPIRATORY PASSAGES AS APPLIED TO INTUBATION, LARYNGOTOMY, TRACHEOTOMY AND BRONCHOTOMY.

A paper with this title was read by Dr. James E. Kelley, (Section Ped., N. Y. Academy of Med., *Virginia Med. Monthly*, vol. xviii, No. ii, 1892) and illustrated by charts, diagrams and elaborate fresh dissections. Especial attention was given to the mechanical view of the subject, as being of far more value than the vast amount of detail to which the student is treated without a clue to its practical application.

The anatomy of the child varies but little from that of the adult. The *thymus* is the only structure that causes important modification in the region under consideration. In operating low down in the pre-tracheal space in young children, it causes serious obstruction. It varies greatly in shape, and is subject to numerous anomalies. It usually forms a body extending entirely across the space between the sterno-mastoid muscles. Two processes pass upward in close apposition to the tracheal fascia and terminate within half an inch of the isthmus of the thyroid to which they are attached by two ligamentous bands. Hence, but a limited portion of the trachea is uncovered and available for operation below the isthmus of the thyroid. This latter body is occasionally absent, and sometimes in an abnormal position—conditions which may be very puzzling to the operator.

It is impossible to make a dissection in this region as neatly and almost as bloodlessly in the living subject as in the cadaver. This is especially true in young patients. The more closely an operation resembles a dissection, the more satisfactory it is to the surgeon, and safer for the patient. Hap-hazard surgery is a lottery, in which fools play for their patients' lives.

In considering the anatomy of the region, the relations of the osseous structure are of much importance. The posterior surface of the larynx aud trachea corresponds and adapts itself very closely to the contour surface of the spinal column. The œsophagus and lower portion of the pharynx, which occupy but little space,

are the only structures between the trachea and the vertebræ. Thus the laryngo-tracheal tube, passing downward and backward, intersects the place of the sterno-mastoid muscles. This is a point of much practical importance in *low tracheotomy.*

Laryngotomy is an operation so undesirable that it merits but little attention. It opens the larynx just below the rima glottidis, where the canal is narrowed into a wedge, the thin edge being anterior. The cartilage is rigid, and of such low vitality, that the injury resulting from the separation, and the introduction of a tube, is liable to be followed by necrosis. There being but little subcutaneous tissue, an unsightly scar usually results, which lies so high that it cannot be concealed.

The hybrid operation, *laryngo-tracheotomy*, is unjustifiable, as it destroys the continuity of the cricoid cartilage upon which the larynx largely depends for its shape. All the external operations upon the respiratory passages are performed between the hyoid bone and the sternum, in the mesial line, between the sterno-hyoid and the sterno-thyroid muscles, but tracheotomy alone being done *below* the isthmus of the thyroid. Not an important structure lies above the isthmus, but below there are numerous important vessels. This lower space is analogous to a space just above the pubis. Two spaces are formed by two distinct layers of fascia, which are fused above the isthmus to form a single fascia. In the superficial space, are the anterior and transverse jugular veins, and a few small arteries. In the deep space are the left innominate, the inferior thyroid, and a venous plexus.

Much interest has, of late, been aroused in the operation of *bronchotomy* for the removal of a foreign body from a bronchus. The author is inclined to think that the operation is justifiable, and that there is no insuperable anatomical difficulty in the way. The cordate shape of the chest places the root of the lung much nearer the surface than is usually supposed. A vertical incision should be made though two or more costal cartilages, or though the ribs just internal to the mammary glands. This readily brings the structures into view, the relations of which are very close and intricate. While the mechanical difficulties are great, a still more important question is the possible effects of interference with the heart and great vessels. Upon this point little or nothing is known. While *intubation* requires but little anatomical knowledge there are certain points which are quite essential. The point of the tube may enter numerous depressions and fossæ, preventing its introduction. The first are the glosso- epiglottic fossæ, separated from each other by the frenum of the epiglottis. The glottis itself is situated in the midst of soft, yielding tissues, which are easily indented.

A slight depression exists just above the false vocal cords which may readily catch the tube. The lateral ventricles of the larnyx are, however, the source of most serious trouble. These ventricles lie upon either side between the true and false vocal cords. The true cords especially in phonation or stridor approach more closely to the mesial line than the false, thus forming a cavity with a concave floor, in which the end of the tube is very easily entangled. Just behind the glottis, and separated from it by the arytenoid bodies is the lower portion of the pharynx, the most capacious snare set for the operator, and the one into which he most frequently falls. The whole area in the infant is readily covered with the tip of the index finger. The surface of the glottis is moreover, very oblique to the pharynx, so that the tube easily glides backward into that cavity. Unless the true cords are accurately reached, the point of the tube is deflected into the capacious and yielding ventricle.

The operation can, therefore, be performed with facility only when the tube is held parallel with the mesial line of the body, but obliquely to the long axis of the rima, and with the point directed toward the inferior margin of the cricoid cartilage. This can be effected by introducing the instrument into the mouth with the handle over the bicuspid tooth, with the point of the tube directed forward toward the glottis. The common error is thus avoided of passing over the epiglottis. Owing to the more extended area opposed to the ventricles, the tube is not so liable to be caught in them. As the surface of the larynx containing the glottis does not look upward, but almost directly backward, the handle of the introducer should be elevated to bring the point of the tube forward.

In young children the epiglottis is sometimes so soft and small as to be found with great difficulty. Pass the finger low

into the pharynx until the resisting cricoid cartilage is felt, on the upper margin of which are situated two movable nodules, the arytenoid cartilages. Immediately above, and in front of these in the mesial line, is the epiglottis.

Dr. H. D. Chapin said that he had performed tracheotomy several times upon children under two years, and had been surprised at the extreme obliquity of the trachea which caused it to lie at the great depth at the lower portion. This was a strong argument in favor of intubation in young children instead of tracheotomy.

Dr. Kelly remarked that he believed that the narrowest point in the respiratory tract was at the true vocal cords.

The Chairman referred to experiments by Dr. O'Dwyer and himself, which proved that the *narrowest point* was not at the cords, but at the cricoid cartilage. An intubation tube could frequently be drawn, with the use of but little force, downward past the cords, which could not be made to pass below the cricoid. A tube much smaller than the prescribed size might drop below the cords, but would not pass below the cricoid into the trachea. The most recent modificaton of the tube approved by Dr. O'Dwyer, consisted in making the lower end bulbous in shape and equal in size to the largest part of the tube. This would prevent its entering the ventricle of the larynx, a very frequent source of failure.

Dr. Kelly replied that if the tube were turned to the side as far as possible during the introduction, it would bring the long diameter in position to act as effectually as the bulb described. The posterior operation of bronchotomy was impossible because of the closer apposition and less yielding character of the ribs requiring extensive resection. The trunk of the intercostal vessels were also met posteriorly instead of the branches.—*Pacific Med. Jr.*

TREATMENT FOR SWEATING HANDS.

Take of tincture of belladona, 1 drachm, eau de cologne, 1 ounce. Mix. Pour a few drops of glycerine into the palm of the hand, then add to it an equal quantitity of the above mixture, then rub the hands together strongly. They should have been well washed in soft water and thoroughly dried previous to the application.—*American Analyst*, Oct. 15, 1892.

SURGICAL TREATMENT OF PERITONITIS.

Dr. C. J. Cullingworth read before the Obstetrical Society of London a paper based on fifty observations of his own, in favor of surgical intervention in certain cases of pelvic peritonitis. The cases include the whole of the author's experience to February, 1891. Pelvic suppuration was present in thirty cases, or 60 per cent. It occurred in the fallopian tube alone in thirteen cases, in the ovary in seven cases (in six of which tube and ovary were in direct communication), while in the remaining four cases the seat of suppuration was either not precisely determined or did not involve either the tube or the ovary. There was strong presumptive evidence of gonorrhœa in a large proportion of the cases, and in four cases the proof seemed complete. Nine of the cases died, a mortality of 18 per cent. Seven of the deaths were due to peritonitis, probably septic, one to acute nephritis, and one to collapse on the eleventh day Of the fatal cases one was tubercular disease of the tubes, two were purulent salpingitis, one was double salpingitis with old hæmorrhage, two were suppurating tubo-ovarian cysts, one was retro-peritoneal suppurating cyst, two were old peritonitis with serous cysts of broad ligament. The mortality sensibly diminished as he acquired experience. Hæmorrhage to a greater or less extent, existed in twelve of the thirty-two cases of salpingitis. In five cases there was amenorrhœa, in three dysmenorrhœa, whilst in twelve the menstrual function was undisturbed. In sixteen cases the removal of the appendages was complete, in twenty-three partial. Of the former, fifteen recovered; of the latter, seventeen. The peritoneum was flushed in twenty-two cases, of which eighteen recovered. Drainage was employed in forty-seven out of the fifty cases. In two cases a fæcal fistula formed, which in each instance healed spontaneously. In five cases the patients complained some time after the operation of more or less persistent pain. A sinus existed in six of the cases when the patient left the hospital: in two of these it had not healed when the patient was last seen. In four cases a hernia had occured in the line of incision. He particularly called attention to the unreliability of the temperature as a sign of the existence of pelvic suppuration, the

temperature before operation having been absolutely normal in twelve of the thirty cases in which suppuration was present. He suggested the following conclusions as the outcome of his experience. 1. Recurrent attacks of pelvic peritonitis in the female ought always to lead to a strong suspicion of the existence of chronic disease of the uterine appendages, and to careful bimanual examination. 2. Purulent collections in the pelvis are particularly apt to set up recurrent peritonitis, and are more common than is at first supposed. 3. Where distinct swellings are found in the posterior quarters of the pelvis, in connection with recurrent attacks of pelvic peritonitis, surgical relief is usually indicated, and generally speaking, the sooner such relief is afforded the better. 4. Purulent inflammation of the mucous membrane of the fallopian tube differs from purulent inflammation of other mucous membranes in the absence, owing to the anatomical situation of the fallopian tubes, of a natural outlet for the pus. A very slight amount of swelling of the mucous membrane suffices to block the tube at its uterine end, and if pus be present in the tube, it must then either remain pent up in the tube, or be poured out through the fimbriated end into the peritoneum in either case becoming a source of danger. 5. Salpingitis being a painless affection, the wall of a pyosalpinx may be on the point of perforation before an acute attack of peritonitis gives warning of the presence of serious disease. 6. It is safer to attack cases of pelvic suppuration from above than from below. 7. Suppurating tubo-ovarian cysts are usually the result of ulceration on the tubal side of the adhesion between tube and ovary, but in exceptional cases results from ulceration on the ovarian side. The immediate results are more satisfactory after complete than after partial operation. 9. One of the chief risks in the operation for the separation and removal of inflamed tubes is the liability to mistake thickened and adherent intestine for diseased tube. The way to avoid error is to trace the tube from its uterine end outwards. 10. The exceptional instance in which pain persists after operation for gross lesions of the uterine appendages are generally to be explained either by omental or intestinal adhesions, or by the co-existence with the actual disease of a neurotic condition, of which the pelvic pain is a mere local expression. 11. Tubal disease in the virgin is generally, if not always, tubercular. 12. Hydrosalpinx, in the great majority of cases, is merely a form of retention-cyst due to occlusion of the distal end of the tube from without. 13. Simple collections of serum, both large and small are apt to form beneath the peritoneum covering the tube and broad ligament in chronic cases of pelvic inflammation especially in those of very long standing. Probably the best treatment of these cysts, after exposing them and making certain of the diagnosis by abdominal section, is simple puncture and evacuation, the risk of removing being, in the author's experience, out of proportion to their importance. 14. Hæmatosalpinx, though no doubt due, in the majority of cases, to tubal gestation with apoplexy of the ovum, is sometimes an incident in the course of a chronic salpingitis. In these exceptional cases the walls of the distended tube, instead of being attenuated by the distension, as Bland Sutton has shown them to be in tubal gestation, are thickened by inflammatory deposits.

The paper was illustrated by a number of drawings and photographs of the appearances in certain of the cases.

The discussion was adjourned until the next meeting.

IODOFORM.

Following are a few of the numerous applications of iodoform. In the obstinate, chronic enlargement of tonsils, so common in our changeable climate, the writer has derived good results from iodoform in pill of ½ or 1 grain, three times a day, persisted in till patient declares throat is well. In glandular enlargements, particularly of a strumous nature, an ointment —20 to 60 grains to ounce of lard, vaselin, or lanolin— will prove a prompt and effective sorbefacient

It has been found useful when applied to enlarged prostrate gland. A professional friend informs me that a prostate enlargement with stricture, that had resisted all other treatment, yielded to the local application of the drug. Writer has seen a small ulcer of leg to which a 20-per-cent. ointment was applied, rapidly fill up from bottom with healthy granulation. Large burnt surfaces have healed and cicatrized without contraction under its benign influence.—*American Therapist.*

Selected Formulæ.

BURNS.

Von Bardeleben recommends for burns of moderate severity the use of a powder of equal parts of subnitrate of bismuth and powdered starch. The burns are thoroughly cleansed, then washed with a three per cent. carbolic, or three per cent. salicylic acid solution. The blisters that are present are then removed under antiseptic precautions and the above powder then thoroughly applied. This is covered with layers of cotton, which are removed as they become saturated with the secretions, except the one next the wound. This dressing may remain undisturbed for one to two weeks or even a month. In most cases, pain disappears a few hours after applying the bismuth. In burns of the face the writer uses the powder with no other dressing.—*Boston Med. and Surg. Jour.*

INHALATION IN WHOOPING COUGH.

℞
Thymolis.....gr. xx.
Acid carbolicis
Ol. sassafragis
Ol. eucalyptus ..... āā..f ʒij.
Picis liquidæ
Ol. terebinthinæ
Ætheris.....f ʒiv.
Alcoholis, q. s. ad.....f ʒiij.

M. Sig.—Put about 30 drops upon a pad of such size as to be conveniently hung around the child's neck, renewing the application every two or three hours.

In severe cases the inhalation treatment is supplemented by the internal administration of:

℞
Acid carbolic.....gr. iij.
Sodii bromid.....gr. lx.
Tinct. belladonnæ.....gtt. xx.
Glycerinæ.....f ʒiij.
Aquæ, q. s .....f ʒij.

M. Sig.—f ʒij occasionally for a child of 3 or 4 years of age.

—*Jour. Amer. Med. Assn.*

GLYCERIN SUPPOSITORIES.

℞
Sodium carbonate ..... 40 grains.
Stearic acid..... 80 "
Glycerin.....1,080 "

Sig.—Dissolve the sodium carbonate in the glycerin, add the stearic acid, heat carefully (preferably by the use of a water bath) until effervescence ceases; the solution is then poured into a suppository mold to make 12 suppositories.

There is no necessity for cooling the molds with ice, although there is no objection to this in warm weather. As each suppository contains about 90 per cent. of glycerin, they must be protected from the action of moist air, which has a tendency to liquefy them. Several expedients are resorted to. Each one may be wrapped in tinfoil or quickly dipped in melted paraffin; or each one enclosed in a small glass vial without a shoulder and made for the purpose of holding one suppository.—*Pharmaceutical Record.*

COUGH MIXTURE.

℞
Syr. tolu
Syr. pruni virg.
Tr. hyoscyami ..... āā..ʒi.
Spts. eth. co.
Aquæ

M. Sig.—A teaspoonful every hour.

—*Janeway.*

For the treatment of the reflex cough accompanying catarrhal sore throat, there is no remedy so effective as a spray of the following, which may also be used as a gargle:

℞
Acidi carbolici.....ʒi.
Pulv. sodii bor.....ʒi.
Cocainæ hychochlor.....grs. xii.
Glycerini purif.....ʒss.
Aquæ rosæ.....ad ʒxii.

Sig.—To be used as directed.

—*Ontario Med. Jour.*, Oct., 1892.

Dr. T. J. Mays (*Pitts. Med. Review*) suggests the following as a stimulant to the appetite in Pulmonary Consumption:—

℞
Acid. phosphoric. dilut.
Acid. muriatic. dilut.
Acid. sulphuric. dilut. ..... āā..f ʒss
Tinct. ferri chloridi

M. Sig.—Thirty drops in a half glass of cold sweetened water during meals

—*College and Clin. Rec.*, Oct., 1892.

THE "SUN" CHOLERA CURE.

Take equal parts of tincture of opium, tincture of rhubarb, tincture of cayenne, spirits of camphor, essence of peppermint.

Mix well together. Dose: fifteen to thirty drops in water; to be repeated in fifteen or twenty minutes if necessary.

This is the original formula for the *Sun* cholera Cure. It was given to the *Sun* in the "cholera year" 1849 by George W. Busteed, then and now a practicing pharmacist in this city. It was published daily in the *Sun* during the summer of that year. It was published at intervals for several years, and again daily during the "cholera years," 1855 and 1866, and has been printed in the *Sun* probably 1,000 times since it first appeared.

The *Sun* cholera cure has been adopted into the United States Pharmacopœia, and is a medicine approved and valued by every medical man in the country.—*American Analyst,* Oct. 1, 1892.

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THE MEDICAL AND SURGICAL REPORTER.

SATURDAY, NOVEMBER 5TH, 1892.

ANTIVIVISECTION.

For a number of years, in England and America, an antivivisection propaganda has from time to time attracted public attention.

Popular sympathy is easily aroused for any reform that is not aimed at popular crimes or vices. Public opinion indignantly resents abstract wrong or evil deeds in somebody else, especially when the heart is wrung by tales of "inhuman" and "diabolical" cruelties sobbed by women with streaming eyes or whispered with bated breath by men.

But justice is likewise an element of an enlightened people and after emotion has been gratified a desire is felt to hear what the other side may have to say. With sincerity which events have shown to be more apparent than real and with imagination fired by enthusiasm hot to melt the bowels of compassion, Zoophilists have prosecuted a campaign against experimental research.

With sincerity more real than apparent the energy expended to save a rabbit from inoculation would raise a fallen woman; imagination tempered with common sense would not perceive more horror in the breathing of an anæsthetized dog than in the wail of a starving child. Fervent enthusiasm might be used to elevate the "submerged tenth," and with better results than when directed to the distortion and hindrance of efforts to aid humanity which time and experience have vindicated.

But the zeal of the anti-vivisectionists has over-balanced the wisdom, and enthusiasm far out-stripped the knowledge.

In this country at a recent congress the utmost the *zoophilistines* could accomplish was the passage of a compromise resolution in effect condemning all *unnecessary* experiments on living animals.

In England, speaking of the recent exposé of the anti-researchers, the *British Medical Journal* says:

> The anti-research controversy opened at the Church Congress and which at one time threatened to extend itself to portentous proportions happily seems now likely to come to an early conclusion; and that in the fashion which must be wholly satisfactory to the profession since physiological experiment of the kind is absolutely necessary for the progress of human knowledge and the alleviation of human suffering. Miss Cobbe has fairly turned tail and quits the field. She does so under an excuse which very well accords with the system of tactics which she has throughout adopted in this matter. For a series of years, and in a variety of publications, this lady brought a series of vile accusations against the most eminent, humane, and accomplished physicians, surgeons, and scientists of the day, having charged men of the rank, class, and character of Lister, Burdon Sanderson, Lauder Brunton, Ferrier, Horsley and their supporters and defenders Paget, Clark, Humphry, Wilks—and in fact the whole medical profession with a few insignificant exceptions she has charged; the one with performing and the other with countenancing and defending, acts which she so

describes as to induce her ally in the attack—Canon Wilberforce—to describe them as "inhuman devils," and the Bishop of Manchester to characterize them as "diabolical." She now withdraws from the contest which she has provoked, because she finds it intolerable to be told, with abundant proof adduced, that her quotations are false; that she has deliberately suppressed the fact that in the very operations to which she refers morphine and chloroform were administered; and that she has repeatedly and fraudulently omitted to state that vital fact.

When her falsehoods are plainly exposed and she is challenged in very distinct language to bring her statements to proof—statements she has not attempted to prove and knows she cannot prove—to withdraw them in sackcloth and ashes, she replies through Dr. Berdoe that her feelings are too much hurt to allow her to take the only course which truth and honor and justice demand—that of humble, open, and lifelong repentance and humiliation.

It is, of course, open to Miss Cobbe to throw her literary assistant into the ditch, and to take for herself the credit of all the high moral indignation with which she fills her signed preface; and thus to leave her literary assistant to bear the dishonor of having deliberately suppressed the vital fact that in the very operations which are quoted in inverted commas as evidences of horrible cruelty, the animals were under the influence of chloroform or of chloroform and morphine. It is of little avail for her to do this, because in her preface she takes upon herself the whole responsibility of asserting that in every instance cited the presence or absence of anæsthetics has been carefully noted. If the fault, nay, the crime, of this suppression of truth on which such an edifice of deliberate, and persistent calumny has been built, be not with her but wholly with her assistant, let her at least express her profound regret at the deceit which has been practiced on her, and at having been led, in that case, unwittingly to have done a most cruel wrong. Thus far she has done nothing of the sort. She is a professed exponent of the laws or Veracity, with a big V, and no doubt the list of eminent persons who have been misguided by her, and induced to allow their names to be paraded as patrons of the Antivivisection Society, has relied upon her Veracity, and taken it to mean truthfulness. Let Lord Coleridge, Mr. Stansfeld, Mr. John Morley, the Bishops of Southwell, Liverpool, Wakefield, Carlisle, in addition to the Bishop of Manchester and Bishop Barry, let them one and all, come forward now and say honestly what they think of this exhibition of Unveracity. They, who are not ladies, need not shrink back because a spade is called a spade; and if this thing is, as Professor Horseley had shown it to be, a falsehood of the worst kind, they need not be deterred from expressing their opinion, even though a "Saxon monosyllable" has been used to characterize the falsehood.

Book Reviews.

Gynecology, A Manual for Students and Practitioners, by G. W. Bratenahl, M. D., Assistant in Gynecology, Vanderbilt Clinic, New York, and Sinclair Tousey, M. D., Assistant Surgeon, Out-patient Department, Roosevelt Hospital, New York. Lea Bros. & Co., Philadelphia. Student's Quiz Series. $1.00.

The authors have discussed the diseases of the female generative organs in the order of the anatomical position of the latter, beginning with the vulva; closely following the teachings of Emmet, Munde and Thomas. As a rule the symptoms of the different diseases and the various operations are clearly and concisely stated, with the exception of Emmet's operation for lacerated perineum, where the amount of denudation necessary and the manner of passing the sutures are not plain.

Some old fashioned notions still cling to the book, however, since pelvic cellulitis is gravely discussed and a differential diagnosis given by which the troubled gynecologist or busy practitioner may decide whether the case in point is one of pelvic peritonitis or cellulitis. The sound is still used as a diagnostic instrument though the contra-indications to its use are carefully stated. We notice, however, one glaring contradiction. On page 30 we are told that the sound is contra-indicated in "any peri-uterine inflammatory condition, or tenderness of the uterus and appendages;" and on page 32 we read that "it should not be used to replace a malpositioned uterus or to test its ability," yet in discussing flexions, we find under anti-flexion (page105) that "the diagnosis consists in the establishment of the stability of the flexion. This may be determined by the use of the sound." That "anteflexion might be mistaken for anterior inflammatory and cellulitic exudations. The sound passed into the uterine cavity will determine these conditions." Probably it will determine these, and also a subsequent section should its incautious use light up an old standing pelvic inflammation or tubal disease. Again, under

retro-flexion, we are told that the sound may be employed to correct the mal-position "when the uterus is too sensitive to be pushed upward by the fingers, but is always more or less unsafe." Surely this is an oversight which will be corrected in later editions.

The dangers of curetting the uterus in the presence of tubal trouble are clearly shown and also that of cervical dilators. In speaking of securing the pedicle in removal of diseased tubes and ovaries, we are told that it is best done by ligating with the Staffordshire knot. In view of the fact that this knot has proven treacherous so often, it would seem better to us that a simple figure of eight or chain ligature be advised.

Extra-uterine pregnancy is fairly well treated and immediate removal of a ruptured tubal gestation advised. In unruptured cases the treatment of delay and doubt by means of electricity is urged. Electricity is advised for acute inflammation, adhesions and exudates, and its use in gynecology thus summed up: "In a certain proportion of cases in the above classes the results are excellent; in other cases the results are discouraging. While not a panacea, it is still a legitimate and desirable means of treatment in gynecological diseases." The contra-indications to its use and its dangers receive no mention and we are led to believe that it is harmless.

The volume is what it pretends to be —a students' quiz-compend, and may be useful as such, a brief remembrancer to the rusty practitioner.

BOOKS RECEIVED.

Diseases of the Lungs, Heart, and Kidneys. By N. S. Davis, Jr., A. M., M. D., Professor of Principles and Practice of Medicine, Chicago Medical College; Physician to Mercy Hospital; Member of the American Medical Association, Illinois State Medical Society, Chicago Medical Society, Chicago Academy of Sciences, Illinois State Microscopical Society; Fellow of the American Academy of Medicine; Author of "Consumption, How to Prevent it and How to Live with it," etc. No. 14 *in the Physicians' and Students' Ready-Reference Series.* In one neat 12mo volume of 359 pages, Extra Cloth, $1.25 net. Philadelphia: The F. A. Davis Co. 1231 Filbert Street.

Tuberculosis of Bones and Joints. By N. Senn, M. D., Ph. D., Professor of Practice of Surgery in Rush Medical College; Professor of Surgery in the Chicago Polyclinic; Attending Surgeon Presbyterian Hospital; Surgeon-in Chief St. Joseph's Hospital; President of the American Surgical Association; President of the Association of Military Surgeons of the National Guard of the United States; Permanent Members of the German Congress of Surgeons, etc. Illustrated with 107 Engravings (seven of them colored). In one handsome Royal Octavo Volume, 520 pages. Extra Cloth, $4.00 net; Sheep, $5.00 net, Half-Russia, $5.00 net. Philadelphia: The F. A. Davis Co., Publishers, 1231 Filbert Street.

Hygiene of the Sick-room. A book for nurses and others. By William Buckingham Canfield, A. M., M. D. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut Street. $1.50.

Diseases of Women. A manual of non-surgical gynecology designed especially for the use of students and general practitioners. By F. H. Davenport, A. B., M. D. Second edition, revised and enlarged. Philadelphia: Lea Brothers & Co. 1892.

A Manual of Physics. Being an introduction to the study of physical science. Designed for the use of university students. By William Peddie, D. Sc., F. R. S. E. New York: P. P. Putnam's Sons. London: Bailliere, Tindall & Cox, 1892. $2.50.

The Ready-Reference Handbook of Diseases of the Skin. By George Thomas Jackson, M. D. (Col.) Philadelphia: Lea Brothers & Co. 1892.

Periscope.

THERAPEUTICS.

ON THE TREATMENT OF GAUCHER IN RELATION TO DIPHTHERITIC PARALYSIS.—ON THE CONTAGION OF ANIMAL DIPHTHERIA TO MAN.

Dubousquet-Laborderie (*Jour. de Méd. de Paris*, 1891, iii., 510.) writes: Since 1884, Gaucher has treated or seen in consultation eighty-five cases of diphtheria. Among these he has seen but once a case of paralysis. Dubousquet-Laborderie, since 1884, has taken care of 127 cases of diphtheria, among which he observed only three cases of paralysis. All three cases were light. These 212 cases are grouped without distinction, but among the number, several have been diphtheria of very severe type. This showing seems to militate in favor of the efficiency of the treatment advocated by Dr. Gaucher—a treatment which arrests on the spot the rapid development of the microbes, and prevents the toxic products from being carried to the nervous centers.

Since the work of the commission appointed by the Academy of Medicine at the beginning of the century, to study in Cologne the contagiousness of the diphtheria of fowls for man, many reports have come to confirm the conclusions of the commission. Klebs records himself for the contagion. But this idea of contagion assumes for premises the identity of the

nature of the diphtheria of human kind and of animals, while the bacteriologists have not generally ratified this, for the reason that the microbes do not resemble each other. The researches of the laboratories can hardly weaken the clinical fact in the matter, however. Loeffler has stated that culture of bacilli from diphtheritic pigeons inoculated upon other pigeons, communicated to them the disease which became promptly general, while the same cultures produced in chickens only small lenticular ulcerations at the point inoculated, without any general infection. From this he concluded that the diphtheria of pigeons and that of chickens were not identical. Some observations tend to show that what is called the quinsy of animals may be equally contagious: Two children assist at the removal of the hide of a horse dead of quinsy; both children die of diphtheria, or which there was no other case in the neighborhood. An adult man removes the hide from a donkey which had died of quinsy, and dies himself of diphtheria. No other case of diphtheria in the region. In another instance, a large number of fowls died of diphtheria, several of which were devoured by pigs. One of the pigs having died of quinsy, its owner pierces the trachea in the presence of a little girl of five years of age. This child succumbs to diphtheria, her sister is attacked also, but recovers. The place where this family lived was thirty kilometers from the nearest settlement, and no communication, direct or indirect, had never been noted in the place.

SEVERE ACCIDENTS OF IODISM.

An unsigned paper in *La Semaine Mèdicale*, 1892, No. 5, p. xviii, gives an excellent account of our present knowledge upon this subject. Œdema of the glottis, of the same kind as serous infiltration of the eyelids, has easily caused death. In instances when at death the body has been covered by a pemphigus, a nephritis has generally been found. At times, even when death has resulted from œdema of the glottis, this renal condition has not been found. Curiously enough the doses which have been followed by œdema of the glottis have been, in general, small (six and one-half grains, Fournier). Attempts have been made to avoid such symptoms as œdema, coryza, headache, conjunctivitis, and epiphora, by its exhibition in milk, or the administration with belladonna, or bromide of potash. Following the method of Röhmann and Malachowski, it is believed that the bicarbonate of soda will prevent these untoward symptoms, by rendering the blood more alkaline, which will hinder the setting free of the iodine of the iodide of potash. It is given in two daily doses to the amount of seventy to ninety grains. In all cases the integrity of the renal filter should be assured, although even in actual renal disease, as chronic interstitial nephritis, we may receive great benefit from this drug. While disease of these organs is not an absolute contra-indication, yet it should be administered in the usual (not small) doses, and at the outset, preferably with the bicarbonate of soda.—*Amer. Jour. Med. Sci.*

INTUBATION IN TUBERCULOUS LARYNGITIS.

Hopkins (*N. Y. Med. Journ.*,) briefly mentions all the cases known to him in which intubation has been performed for the relief of dyspnœa due to tuberculous laryngitis, namely, three cases by Massei, who stated that stenosis might be got to yield in a surprisingly short space of time; a case by Dillon Brown, and another by Cox, both performed to procure euthanasia; and one case of his own. This was a woman, aged 39; after some months of gradual encroachment on the lumen of the larynx by the tuberculous process, she began to suffer from suffocative attacks, and when called to her Hopkins found that the dyspnœa was extreme, preventing sleep and swallowing. The rima was narrowed and the cords fixed owing to a mass of thickening in the posterior commissure. After failure with a large (largest for child of twelve) O'Dwyer's tube, a size smaller was passed after overcoming much resistance. The relief was immediate and considerable. The tube was expelled during a fit of coughing, but the relief to the dyspnœa persisted. Examination of the larynx showed that this was due to a portion of the mass in the posterior commissure having been torn away; some cicatricial process appears to have occurred later, still further enlarging the rima. She had an attack of dysphagia twenty-four hours after the intubation, and expectoration became blood-stained.

The condition of the patient, however, was materially improved; she regained appetite, was able to go out, and for the remainder of her life—about ten weeks—she had no recurrence of the dyspnœa.

Creasote, in doses of 4-19 drops daily, has produced good results in the hands of Dr. T. Valentine in *diabetes mellitus.*

Hot water, by enema, has been warmly recommended as a hæmostatic in *post-partum hæmorrhage*, or in threatened *abortion.*

Camphoric acid in 2 per cent. solution, applied on a cotton tampon, is reported as affording prompt and permanent relief in *acute coryza.*

Salicylic acid, while formerly condemned as a *diuretic* by most authorities, is now warmly recommended as such.

Euphorbia-pilulifera tincture (15 drops every two hours) is lauded as being very efficacious in all forms of acute "*cold in the head.*"

Calcium sulphide in 1-20-grain doses is reported to prevent the formation of *boils,* and in ¼-grain doses to hasten their suppuration.

Ammonium acetate, in 15-grain doses, is reported to have given excellent results in *scarlatina.—Merck's Bulletin.*

POISONING BY ANTIFEBRIN.

During the last influenza epidemic in Sweden, a great many cases of poisoning by antifebrin were observed. This was due to a very prevalent, careless use of the drug without a doctor's prescription. Although somewhat severe symptoms were observed in many cases, all ended in recovery. In one case, reported by Dr. W. Warfring, a man aged thirty-five took two drachms of antifebrin. The principal symptoms observed in the order of their occurrence were a sense of fatigue and a feeling of weight in the head, coming on in five minutes; soon followed by a sensation of black and red clouds before the eyes; then sleep, from which the patient was easily aroused. On attempting to rise, he appeared like one drunk, fell down and became unconscious. This was soon followed by a comatose condition, cyanosis, relaxed muscles, cold hands and feet, lowering of temperature, respiration and pulse. These latter improved after hypodermic injections of camphor and ether, but the comatose state continued for sixteen hours. The symptoms on the next day were frontal headache and cyanosis. The urine was clear, deep-colored, and contained much indican, otherwise normal. Some cyanosis remained on the third day, and the urine still contained an excess of indican. Another case was that of a girl of fifteen, who took nearly half an ounce of antifebrin. In a quarter of an hour her whole body became hot and perspiring. Vertigo, impairment of sight, and unconsciousness followed. This last condition continued for seven hours and a half. There was vomiting. Coma was not so deep as in the other case; cyanosis was well marked; pupils slightly contracted, temperature slightly subnormal. This patient recovered more speedily than the other, probably because the stomach was washed out within an hour after the antifebrin was taken. Similar, though not so severe, symptoms have been observed in other cases; the doses taken being, in one case, two scruples on two consecutive days, in two others two teaspoonfuls each, in one dose.—*Boston Med. and Surg. Jr.*

CRANBERRIES IN RHEUMATISM.

Dr. J. Hermann (*Wiener med. Presse*) speaks very highly of cranberries in the treatment of rheumatism, both acute and chronic. This berry has long been employed in popular medicine as an antirheumatic remedy. The writer has a case of chronic rheumatism which had resisted the salicylates and all the ordinary remedies. The decoction of cranberries was given, and after a few weeks a striking improvement set in, which was followed by a complete recovery in two months. The remedy was also tried in nine other cases, of which six were acute and three chronic. All these had been treated in vain with the salicylates and the various preparations of iodine, as well as with warm baths. The berry was employed in the form of a decoction, thirty to sixty grams of the entire plant—leaves, stalk and root—to 180 grams of water. This is drunk in twenty-four hours. The duration of

of the treatment was from one to three months. Out of the nine patients, seven were cured, while in two the remedy failed. In all the nine cases a slight diuretic effect was noticable. It is advisable to continue the use of the decoction for some time after the disappearance of the symptoms, in order to prevent relapses.

SURGERY.

CONSERVATIVE SURGERY FOR NASAL OBSTRUCTIONS AND DEFORMITIES.

In a demonstration in the nose and throat clinic (*Post-Graduate*, New York), Dr. Clarence C. Rice emphasizes the following points in relation to conservative surgery for nasal obstructions and deformities:

1. The only way to become skilful with instruments of examination and expert in diagnosis is to personally examine the upper respiratory tract of as many patients as possible.

2. Cases for operation on the nose should be selected only after careful deliberation, and the relation in size between the obstruction and the total capacity of the nostril should be considered. When in doubt about the necessity for operation, try for a time treatment by topical application.

3. There are many cases of so-called "hypertrophic rhinitis" where the apparent hypertrophies are nothing more than erectile tissue distended by blood or serum, and many of these do not require the application of any destructive agent. The effect of a weak solution of cocaine upon these will aid in the diagnosis.

4. Remember that we do not find advanced hypertrophic changes in young people. The soft tissues are nearly normal, so it is not wise to injure the physiological tissue by operative procedure.

5. Deformities of the nasal septum are usually the first pathological condition to appear, and are the cause of the later changes in the soft structure of the nose. The removal of this septal lesion should first claim the attention of the operator.

6. Do not produce by operative measures large ulcerations on the septum, if they can be avoided, as there may be present in the case some constitutional vice, and therefore the ulcerations will be healed with difficulty. Nothing is more efficacious in their treatment than the use of antiseptic washes and covering.

7. A "traumatic" atrophic rhinitis can be produced by destroying too much of the soft tissue of the nose.

8. When hypertrophic enlargements are present on both the anterior and posterior ends of the turbinated bones, reduce the anterior bones first, and the posterior ones will usually disappear without cautery application. The treatment of these by sedative and protective oily sprays may accomplish so much that the application of acids or cautery will not be required.

9. Use the galvano-cautery by inserting the pointed wire into the turbinated hypertrophy rather than by burning the mucous surface with the flat electrode.

10. Too much care cannot be exercised in the use of antiseptic solutions, both in preparing the nose and instruments for the operation, and also during and after the operation, until all ulceration is healed. Without the use of antiseptics the patient will surely suffer from sepsis.

THE OPERATIVE TREATMENT OF INTUSSUSCEPTION.

Hutchinson (*Arch. of Surgery*) says that the rule of practice in the early stages of intussusception ought to be invariably to try insufflation and injection, and it is only when they have failed that laparotomy ought to be thought of; they are not without risk, and must be tried with judgment and caution. There is no reason for preferring insufflation to the injection of water; for the latter he prefers hydrostatic pressure to the use of a syringe. In infants under two years of age laparotomy is so uniformly fatal that it should not be resorted to. Above that age, if injection has failed, a prompt resort to laparotomy should be recommended. It is desirable that this should be done early before the serous surfaces have become adherent. In the operation the chief difficulty is in releasing the incarcerated part. This is best done by pressure from below, not by traction from above. The older the patient the slower will be the progress of symptoms, and the longer the period during which it is possible to effect relief by operation. In adults a successful operation is possible even after a very long interval.—*British Medical Journal.*

MEDICINE.

PYORRHEA ALVEOLARIS.

M. W. Swartz (*Dental Review*) says: Pyorrhœa alveolaris, or Rigg's Disease, is first indicated by an uneasy sensation; then inflammation of the margins of the gums; looseness of the gums about the teeth, which form pockets; necrosis of edges of alveolar processes; a tendency to hæmorrhage, inflammation extending deeper into the gums; small sulci filled with pus; looseness of the teeth and change of position of the same; disagreeable taste; peculiar fetor of the breath; dark livid color of gums, with thick margins, and often extremely sensitive to the touch; in some cases the gums are denuded of their epithelium, with a polished appearance, in others with a pimpled surface; the teeth, at length, held in their cavities by a tough ligamentous attachment, due to the change occurring in the peridental membrane. A simple form of this disease may manifest itself at the gum margin, indicating its presence by a congested appearance, beneath which may be found a granule of calcified material. While in many cases there is a general congestion of the affected gum, and a proneness to hæmorrhage; in other cases the gum may present an anæmic appearance—pale and bloodless. This disease may also be associated with syphilis, mercurial salivation and scurvy. The deposit of salivary calculus and calcified substance is supposed by some to be secondary to this disease, as a deep red and denuded gum about the necks of the teeth may be present without any deposit. Yet in the vast majority of cases, this diseased condition is traceable either directly or indirectly to calcic formations about the neck and roots of the teeth.

First of all in any given case, completely remove all deposits from the teeth. Have no fears as regards the hæmorrhage of the gum during this operation or any part of this treatment of these cases. In practice I have found that free hæmorrhage in advanced cases seems to prove a benefit rather than a detriment. Also that when the gums become more or less lacerated during the removal of the deposit from the roots, the condition seems rather to promote a healthy condition than otherwise. However, considerable care should be exercised during this operation, for upon the extent to which the gums will be restored to their natural height and position about the root of the tooth, depends the condition of the remaining portion of the peridental membrane. And in fact it is quite as necessary to preserve the peridental membrane for this purpose, as it is to preserve the periosteum while operating upon diseased bone.

For an injection into the pockets after the removal of the deposit, I am partial to the use of peroxide of hydrogen. When it cannot be obtained fresh, I use a solution of carbolic acid, from two and one-half to ten per cent, or any of the other good antiseptics or disinfectants. For the purpose of injecting I employ a Dunn's syringe where the pockets are not very deep. When the pockets are deep, I employ the ordinary metallic syringe. I usually prefer it as one can then apply force enough to thoroughly wash out all foreign matter from the pockets.

After thoroughly injecting the pockets, absorb with absorbent cotton all moisture about the tooth to be further operated upon. And then by the use of a piece of soft pine wood cut in form of a tooth-pick, force into the pocket, its full distance, finely pulverized fresh cupric sulphate. For this purpose I employ nothing else. This operation will likely cause considerable pain, but never mind that. Heroic treatment is demanded. And if this operation is thoroughly performed at first treatment, in many cases nothing further need be done than the injection of the antiseptic and disinfectant. I am not in favor of too frequent treatment of these cases. And unless the case in hand is far advanced, I advocate the lapse of five or six days between treatment. Of course in the meantime I have the patient use some good antiseptic and disinfectant wash, alternately with a wash that tends to toughen and harden the gums. And in many of the milder forms of this disease after the removal of the deposit, I confine myself strictly to the employment of washes, and the results attained in almost every instance are very gratifying.

The washes I direct the patient to use are antiseptic and astringent in character.

VARIETIES OF VERTIGO.

Dr. Charles K. Mills (*Philadelphia Polyclinic*) says: No classification can be made to include every form of vertigo not

directly the result of labyrinthine disease, but the most important varieties are:

1. Vertigo dependent upon intracranial disease, chiefly tumor and pachymeningitis, but not including under this general head the disturbances of equilibrium arising from disease of the cerebellum or corpora quadrigemina. The three most frequent general symptoms of intracranial tumor are headache, nausea or vomiting, and vertigo; and these are commonly dependent upon the same mechanism. Most cases of brain tumor originate in the membranes of this viscus; the trigeminal nerve has a wide distribution in the dura, and intense localized irritation of its branches gives rise directly to pain and indirectly to nausea vomiting and vertigo. The deep nucleus of this nerve is closely related in position to the nuclei both of the pneumogastric and the auditory nerves, and the reflection or irradiation of powerful impressions from the former to the latter will cause vomiting and vertigo.

2. Ocular vertigo, which may spring from several conditions, but is most commonly due to serious disorders of refraction, to paresis or spasm of the ocular muscles, or to excessive retinal irritation. In any case the cause of which is obscure, the eye should be carefully considered and its defects corrected. Partial tenotomies and exact corrections or re-corrections with glasses have been found efficient, particularly in some of the milder but none the less annoying vertigoes.

3. Vertigo due to disease of blood-vessels, as anterior-sclerosis, from alcohol, syphilis, gout, old age, etc. The diagnosis of these cases is to be made by excluding carefully ear, brain, eye, severe local disease anywhere, toxæmias, etc., but chiefly by a careful examination for arterial or arterio-capillary fibrosis and the accompanying conditions of the heart, kidneys, liver and other organs. Reedy, resisting arteries, excessive arcus senilis, changes in the pulse rate, reduplicated or clanging cardiac sounds, and other well-known phenomena, will be present.

4. Vertigo which has its source in the state of the blood, under which general head are included those forms of the affection arising from anæmia or hyperæmia, lithæmia, and a large variety of toxæmias; and from the direct action of drugs and poisons.

5. Vertigo dependent upon intense irritation reflected to the labyrinth or brain from more or less distant regions of the body—commonly classed as nasal, pharyngeal, laryngeal, gastric, intestinal, hepatic, uterine, ovarian, etc. The reflex origin of these vertigoes is often doubtful; they are more probably due to a toxic state of the blood, which is produced in various ways. —*American Lancet.*

A NEW TREATMENT FOR PHTHISIS.

De Renzi (*Riv. Clin. e. Terap.*, No. 6, 1892) publishes a new treatment for phthisis, consisting in the use of iodine internally in the following form:

℞

Aq. dest.,	1000 grs.
Iodine,	1 gr.
Pot. iod.,	3 grs.
Sodium chlor.,	6 grs.

This was first injected into the ear vein of healthy and tuberculous rabbits, and into the subcutaneous tissue of dogs, rabbits and guinea-pigs. Complete tolerance being established, he tried the remedy on phthisical patients. Hypodermatic injections were first given, and as much as 100 grains were given; these were not, however, well borne, so the drug was then given by the mouth, using from 500 to 550 grains. Nineteen patients, nearly all with advanced phthisis, were thus treated. In all, the treatment produced increased appetite and increased flow of urine. Symptoms of iodism arose in a few instances, but disappeared on leaving off the treatment. The author is of opinion that the results of this treatment will compare favorably with those of any other at present tried; the body-weight increases, the number of bacilli diminishes in the sputum, and the temperature is reduced to normal—*Med. Age.*

HAY ASTHMA.

Dr. Edward S. Blair has treated a girl of ten years who for one-half of her life had been subject to annual attacks of this disease. Under the use of potassium iodide and grindela robusta there were slight catarrhal symptoms, but on lying down marked wheezing and dyspnœa. These symptoms were checked entirely by the fluid extract and euphoribia pilulifera [dose not stated], and the relief of these symptoms were followed by a marked increase in flesh and strength.—*Canadian Prac.*

GONORRHŒAL RHEUMATISM.

Dr. Brodhurst advises, as treatment for gonorrhœal rheumatism, that the affected joints be wrapped in lint covered with mercurial ointment, that they should be bandaged as firmly as can be borne, and that the patient should be brought rapidly under the influence of mercury, preferably by inunction. With such treatment, pain and swelling quickly disappear and the the joints resume their normal condition. At this stage passive motion should be instituted to ascertain if the motion of the affected joint is free, for lymph will have been deposited on the synovial-membranes through which adhesions form. These bands soon become firm and resist any attempt the patient can make to move the joint.

This treatment, according to the author, never fails if resorted to at the onset of the inflammatory stage. The knee, the hip, the elbow, and the shoulder are most frequently affected by this form of inflammation. Ankylosis may result—not in one joint only, but in every articulation of the body. When, after inflammation has ceased and passive motion has not been employed, adhesions remain and become firm, force is needed to restore mobility. This should always be used in the direction of flexion, since when thus employed no injury can accrue to any structure. Under some circumstances division of the flexor muscles is necessary. —*Therapeutic Gazette.*

METHYL VIOLET IN DIPHTHERIA.

Jaenicke (*Therapeutische Monatshefte,*) reports a number of experiments upon cultures of Lœffler's bacillus with methyl violet, and a few cases of pharyngeal diphtheria, in which he has used local applications of the substance. The number of his cases has been too small from which to draw conclusions, but in one or two days he noticed a fall of temperature, with coincident return of strength and appetite. He directs that a probe be covered with cotton and moisture in a saturated watery solution of methyl violet, and applied with considerable pressure to the membrane until it is colored a deep blue. In from two to five hours, when the color has disappeared from the membrane, a second application must be made. In cases where there is septic intoxication necessarily the local use of the methyl will not save the patient, but by its energetic use on new membrane he thinks it will prevent its further development. He has never noticed any bad results, either local or general. He concludes his article as follows: "Methyl violet recommends itself as a curative medicine for diphtheria.

"(1) Because it has an especially antiseptic action on Lœffler's bacillus. Its power of preventing the growth of the bacillus being greater than its power of killing the bacillus, the application of the substance should be repeated as soon as the diphtheritic membrane loses its blue color.

"(2) Because it remains in the pseudo-membrane as well as in the mucous membrane of the mouth for an unusual length of time, and its antiseptic power is thereby increased.

"(3) Because it is relatively less poisonous than other materials heretofore used." —*Univ. Med. Mag.*, Sept., 1892.

SILVER NITRATE IN DIPHTHERIA.

Dr. Piliére, of Paris, has since two years been treating diphtheria by means of swabbing the throat morning and evening with a cotton tampon saturated with a 1:30 solution of silver nitrate. He rubs the affected parts pretty briskly, so as to detach the false membranes; then the throat is sprayed with a 1:300 solution of corrosive sublimate, in children above two years of age, and with a 1:1000 solution in younger children—the spraying being repeated every two hours during the day and every three hours of the night. It is stated that no untoward effect is produced by this treatment, and that the diarrhœa which might occasionally occur will disappear of itself.—*Ex.*

INFECTIOUS ERYTHEMA IN DIPHTHERIA.

Mussey's *These de Paris,* 1892, treats of this subject. There are several kinds of erythema more or less constantly present in diphtheria—the polymorphous, the rubeolic, the scarlatinoid, and the desquamative scarlatiniform. Often these are transitory. Some are difficult to recognize, as purpuric erythema. Such eruptions are of graver import in regard to prognosis when occurring late in the disease.—*Ex.*

OBSTETRICS.

THE CORROSIVE SUBLIMATE DOUCHE.

A French physician, in a recent article on the use of the corrosive-sublimate douche in lying-in women, cites thirty cases of death due to poisoning caused by the drug employed in this way. In the fatal cases, the strength of the solution was 1 to 1,000, or over, in ten instances; 1 to 1,500 in two; and 1 to 2,000 in the remainder. The absorption of the poison, the writer states, probably took place in the uterus at the site of the placenta. The symptoms observed were profuse diarrhœa with tympanites, vomiting, stomatitis, renal complications, pulmonary congestion, bronchitis, broncho-pneumonia; later on, circulatory disturbances, torpor, prostration, and collapse. The skin is either dry, or covered with cold and viseous perspiration; there is itching, which often precedes death; and, especially, a very peculiar and often generalized erythematous eruption. Lenticular spots also appear, which grow larger and of a deeper color at their periphery; they join together and form large blotches on the face, extremities, and trunk. The significance of this erythema is serious. It was often observed, shortly before death in cases where a cure had been looked for.

The writer concludes his article by stating that corrosive-sublimate must be used with "science and prudence in confinements, and that it is dangerous in inexperienced hands."

At a recent meeting of the Obstetrical Section of the New York Academy of Medicine, Dr. Von Ramdohr called attention to the danger of corrosive-sublimate douche, even in weak solutions. He said he did not see why physicians persisted in using it until a fatal case of poisoning came under their personal observation.—*Doctor's Weekly.*

RESULTS OF GONORRHŒAL INFECTION IN WOMEN.

Von Rosthorn, in the *Präger Medicin. Wochenschrift,* 1892, states that the prognosis of gonorrhœal infection is favorable as long as the poisonous process does not invade the cervix. When this happens, rapid extension of the inflammation results, an "ascending gonorrhœa" causing marked changes in the genital tract and surrounding tissues, with special preference for the endometrium and tubes. The dependent portion of the pelvic peritoneum also becomes involved. There may be latent gonorrhœa that is without acute stage, and insidious in its development. Later, this may become an ascending gonorrhœa with its adverse consequences. It is possible to cure the infectious disease itself, but the uterine catarrh and adhesions remain, starting up morbid processes at each menstrual epoch. In regard to accidents connected with the puerperal state, the author does not consider gonorrhœa as important a factor as Saegener does. In the acute stage applications of tannin and iodoform to the vaginal mucous membrane are recommended, and injections of bichloride of mercury, one part to one thousand. Cauterizations of the cervix with fuming nitric acid can also be employed, but intra-uterine medication is to be avoided. In the later stage of infiltrations, adhesions, and cicatrices that cause pain, according to the Thuer-Brandt method is of great value, together with the intra-uterine galvano-caustic. Observations based upon one hundred cases lead to the belief that removal of the tubes will always result in almost permanent freedom from pain. These cases have to be watched constantly after the operation, to insure the prophylaxis of ascending gonorrhœa.—*N. Y. Med. Record.*

NARCOSIS IN OBSTETRICS.

Dührssen (*Berlin. klin. Wochenschr.*) considers that an anæsthetic is of great diagnostic as well as therapeutic value. The patient (often much excited) can be kept quiet by a few drops of chloroform whilst certain important factors in labor are being ascertained, such as frequency of the fœtal heart sounds. Primiparæ are often very troublesome to explore, and it is then only by the aid of anæsthetics that the obstetrician can make sure whether the head has already entered the pelvic cavity. Narcosis is valuable for the timely diagnosis of occipito-posterior and transverse presentations. In explorations where the entire hand must be introduced into the uterus, anæsthetics are, of course, indispensable. For therapeutic purposes narcosis is needed for turning, especially combined external and internal version, for

detaching adherent placenta, manual removal of ovum and membranes in abortion, reposition of impacted tumors during birth, the management of prolapsed foot in breech presentation, and turning in incomplete dilatation of the os in multiparæ. In irregular contractions of the uterus chloroform often hastens labor. Sepsis is, in Dührssen's opinion, a contraindication for anæsthetics, and deep or long-maintained narcosis is dangerous in cases of eclampsia. It should only be induced, in such cases, to facilitate rapid delivery by operation. Tetanus uteri is also a contraindication. In acute anæmia a very little chlorolorm will take effect. When chloroform is given, Dührssen advises the obstetrician to get the patient well under, and then to leave the mask in the charge of the midwife, who must from time to time pour a few drops into it.—*British Medical Journal.*

GYNECOLOGY.

PERITONEAL ADHESIONS AFTER OVARIOTOMY.

Ovariotomy appears to be a somewhat more serious operation than we have of late thought it to be; for we are now learning something of the remote dangers which result from the adhesions of peritoneum and bowels formed during the convalescence from the ovariotomy. In the *Lancet*, September 10, Dr. Phillips of London, relates several fatal cases (one his own) in which such adhesions (found post-mortem) had caused death. We extract the report of one case, with Dr. Phillips' remarks on it:

Case 3 (Shively).—The patient was forty-five years of age; ovariotomy was performed four or five years before, since which time she has been constipated and has had periodic attacks of colic, which usually gave way to subcutaneous injections of morphia. She took a dose of cathartic pills one morning shortly before her illness began, and a good action had taken place; colicky pains, however, unsued in the evening. The pain increased and sickness began, but no tympanites appeared; long tube enemata were given repeatedly, but no further action took place. The vomiting and pain increased, and the patient died after several days' illness.

The post-mortem examination revealed a complete key to the illness. "There were extensive adhesions of the intestines to the sides and posterior wall of the abdomen, binding them firmly down." This was doubtless the reason for the non-appearance of tympanties. A portion of ileum eighteen inches above the cæcum was adherent to and incorporated with the cicatrix of the wound of the previous ovariotomy. "Around the short portion, between this and the cæcum, a loop of small intestine was twice twisted, forming a kind of knot," and a complete occlusion was thus produced. The direct cause was doubtless the cathartic given on the morning of the commencement of the illness, possibly assisted by some favorable position assumed by the body.

We have therefore three distinct varieties of causation of intestinal obstruction after ovariotomy: (1) When the adhesion arises from the stump; (2) from the cicatrix of the abdominal wound; (3) from intestine to intestine. The small intestine, in consequence of its greater mobility, is liable to form adhesions with any abraded surface; hence we find them more common in connection with the small than the large intestine. Martin, of Berlin, has proved, as the result of observations on second operations on the same patient, the presence of slight non-septic peritonitis as the immediate effect of every ovariotomy. The colicky pains which patients often suffer from after ovariotomy, and complicated with constipation, are due to small peritonitic adhesions, the result of this localized non-febrile peritonitis Hunter has devoted a paper to this subject and it is well worthy of perusal. If the prevention of formation of adhesions could be arrived at for forty-eight hours after operation, our position would be a more favorable one. In an interesting paper by Dr. R. T. Morris on this subject he declares that he has completely demonstrated the fact that an application of a film of aristol to the stump prevents secondary peritoneal adhesions; he experiments on rabbits and relates one case of abdominal section in the human object. The above facts seem to point strongly to the desirability of our knowing the subsequent histories of those patients whose cases fill the long lists of ovariotomies published from time to time and classed as complete successes. —*Maryland Medical Journal*, Oct. 15, 1892.

HYGIENE.

THE DIETETIC TREATMENT OF ULCER OF THE STOMACH.

Dr. F. Roux states that the treatment of this disease must not be based upon the principle of reducing the work done by the stomach to a minimum. The diet must consist of substances which are digested in the intestines, such as milk, eggs, farinaceous food, fruit, and green vegetables. Farinaceous foods play an important part in the treatment of gastric disease; together with eggs they should constitute the chief diet, but in order that they may not irritate the gastric mucous membrane they should be administered in a soluble form. Of potatoes, beans, and lentils, the meal of the latter is probably the best, as it contains a large amount of nitrogen and a quantity of iron equal to that contained in meat. Light puddings are nutritious, especially when made with eggs. Green vegetables are useful; carrots and turnips should be mashed; green peas and salads may be eaten; cabbage should be prohibited; fruits should be cooked, as they ase not readily digested in the raw state. The single exception to this are grapes, which can be given at any time and in any quantity, especially if constipation is present. They are best taken in the morning and middle of the day.—*Journal d' Hygiène.*

THE CARE OF THE HAIR.

To much emphasis cannot be laid on the fact that the hair should be cared for intelligently, appropriately and regularly. It should be cleaned in tepid water once every week, and once a month—presuming there be no disease like abundant dandruff or any other scalp trouble—with a very mild solution of some simple alkaline substance like borax or bicarbonate of soda.

It is always better to wash the scalp and hair before retiring, as the opportunity for drying it is better, especially if the hair is thick or heavy, and there is less likelihood of taking cold. Many of the finest suits of hair we have ever seen have been preserved and kept beautiful by the simple use of tepid or cool (not icy) water, the year round at morning toilet. As with everything else so with the hair, good judgment must be the guide. The fine comb, as an article of use for the hair, should never be thought of; the centre of a hot fire is the place for a fine comb, A good brush is the great tonic for the hair.

DRESSING THE HAIR.

Some writers utterly prohibit the use of oil or grease on the hair; others unduly magnify the advantages of its constant applications; but between abstinence and unlimited use is the true plan. Some hair is harsh and dry, do for it what you will; such hair requires the occasional application of oil; other hair is alawys oily and "just right; " for the latter very little "dressing is required.

PRESERVING THE HAIR.

To keep a "heavy head of hair " is the desire and delight of every one. The law of heredity excepted, there is no reason or cause why so many should be bald or have thin or "patchy " hair. Carefully attending to the hair, having it trimmed at regular intervals, keeping the scalp clean, never allowing a barber to use other than your own brush and coinb in arranging your hair, avoiding the constant wearing of a hat—these are all contributing influences towards the preservation of the hair "e'en down to old age" and the grave.

NEWS AND MISCELLANY.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY FROM OCTOBER 23, 1892, TO OCTOBER 29, 1892.

Captain Freeman V. Walker, Assistant Surgeon, U. S, Army, granted leave of absence for one month, to take effect on arrival of 1st Lieut. George D. De Shon, Assistant Surgeon, U. S. Army, at Fort D. A. Russell, Wyoming.

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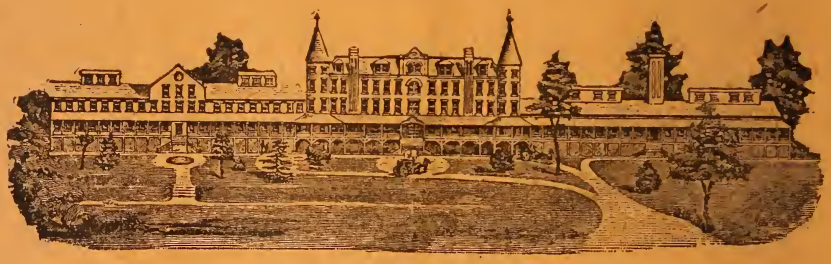

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Original Articles.

INFLAMMATION ABOUT THE CAPUT COLI.*

By G. FRANK LYDSTON, M. D.,
CHICAGO.

PROFESSOR OF THE SURGICAL DISEASES OF THE GENITO-URINARY ORGANS, AND VENEREAL DISEASES, IN THE CHICAGO COLLEGE OF PHYSICIANS AND SURGEONS.

It is with some hesitation that I have selected a title of so general a character for the paper which I have the honor of presenting to this Society. It has come to pass in the case of inflammation in the vicinity of the colon that most of our writers are attributing all of the inflammatory affections in this region to pathological conditions of the appendix. The reason for this is not far to seek. Most of the recent work that has been done upon this subject has been done by operating surgeons, especially those of abdominal tendencies. These operators are necessarily brought in contact with the more serious cases of inflammation about the caput coli. *i. e.*, those in which pus has either formed or will inevitably do so within a short time, and it must be confessed that in these cases the appendix is most often at fault. The general practitioner comes in contact with both classes of cases, those in which the operation is required, and those in which recovery occurs without surgical intervention. The surgeon—who is most frequently called in only when an operation is inevitable—necessarily looks upon the subject with an operative bias, and is apt to say without qualification, that all cases of inflammation about the caput coli require operation. If, on the other hand, the general practitioner has a run of cases in which recoveries without operation preponderate, which is very often the case, he is apt to assume an ultra-conservative position. I have heard surgeons support the operative treatment in most radical terms of these cases without the least qualification or the slightest attempt at differentiation of cases and conditions. On the other hand, I have heard practitioners of experience assert that operation is never indicated, and that conservative treatment should be adopted as a matter of routine. For example, I heard a practitioner of many years' experience, state at an important society meeting, that the free administration of opium and the faithful application of hot poultices was the only treatment which was warrantable in cases of this kind. In support of this position, he stated that his father before him had treated such cases in a similar manner and with success, and that he hoped that this son, who was to follow him in his practice, would also treat them in that way. It was rather painful to note this addition to the list of hereditary fatalities, and it would, I presume, have been a hopeless task to convince this old gentleman that certain cases of peritonitis of a fatal character, which had occurred in his practice, were due to undiscovered or neglected perityphlitic abscesses.

With regard to the statistics compiled with a view of determining the relative value of conservative and operative measures, it is probable that we will always experience extreme difficulty in forming a positive opinion. The surgeon reports a long list of cases, showing the brilliant successes attendant upon operative measures, without the least attempt at

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discrimination as regards the relative gravity of his cases. Not all surgeons are open to criticism in this respect, it is true, but unfortunately we are compelled to rely for our statistics, not upon the cases of a few experts, but upon the cases of a large number of practitioners, many of whom may be classed as the average surgeon, whose opportunities for the post-mortem verification of diagnosis and for the comparison of a large number of cases are rather limited. Some reports are based mainly on cases of operation, the gravity of which is no greater—as far as the operation, *per se* is concerned—than that of opening an ordinary abscess. Other reports are based upon cases requiring active interference with the caput coli and resection of the appendix. In other instances, the surgeon is not appealed to until rupture and infection of the general peritoneal cavity has occurred. Necessarily there is in such cases a very meagre prospect of cure by operation, yet such cases are accredited—and I think unfairly—to the sum-total of operations for perityphlitic abscess, or appendicitis, if you please. I think that the necessity for a careful differentiation of cases in order to enable us to come to a rational conclusion as to the comparative value of radical or conservative measures is at once apparent. I believe, moreover, that the conservative practitioner and the abdominal surgeon should not work on parallel lines, as seems to be the tendency, but upon those which converge to logical conclusions of the advisability of occupying a middle ground in the controversy. The surgeon is a potential force for the accomplishment of greatly-needed work in cases of inflammation about the caput coli. He often, however, is more efficient for good when he brings the experience of the level-headed, conservative, general clinician to his assistance. A series of successful conservative cases under conservative measures by no means proves that a routine conservatism is best in such cases, neither does an occasional case dying without operation, when every expert surgeon knows that an operation may have saved life, prove that operation is indicated.

Nowhere has modern surgery been characterized by more signal triumphs than in the pathological study, diagnosis and treatment of inflammation about the head of the colon. This great advance in our knowledge and surgical resources is to be attributed to the arduous labors of American physicians and surgeons,among whom Sands, Weir, Morton, Hoffman, Fitz, Pepper, McBurney, Dennis, and Stimson are especially prominent. The papers of Dr. McMurtry,of Louisville,and Drs. Murphy and Lee, of Chicago, have been important contributions to this subject,

It was long believed that inflammation of the cellular tissue about the colon was the main factor in perityphlitic inflammation. Modern pathologists and abdominal surgeons have disapproved this theory as far as its general applicability is concerned, and have attempted to show that a diseased appendix is the *fons origo et mali* in practically all of these cases, abjuring the cellular tissue altogether and seeming to believe that by some peculiar dispensation of Providence, cellular tissue in this location is protected from those causes of inflammation and suppuration which are potent elsewhere. This, it would appear, is an extreme view and one which bids fair to work sad havoc with the luckless appendix. It has even been facetiously suggested that the only salvation for the human race is a prophylactic excision of the appendix as soon after birth as practicable. Whether this would result some generations hence in an appendixless type or man is a question, but if rats may be bred without tails, I suppose such a result will not be too visionary for considera tion if the present furor of excitement over the appendix keeps up. Like Davy Crockett after the coon, when the enthusiastic surgeon starts after the appendix he is bound to get it. It remains to be seen what he will do when the appendix becomes obsolete. Much as we may deplore surgical radicalism, the female ovary has had much to be thankful for since the attention of the abdominal surgeon has been directed to the appendix.

Regarding the relation of the cellular tissue to abscesses about the colon, while it is undoubtedly true that in the majority of cases it bears the same relation to inflammation, and perhaps perforation, of the appendix that so-called pelvic cellulitis bears to pathological conditions affecting the uterine appendages, and is of a purely secondary nature, it should, I think, be assigned a little more important rôle than

most abdominal surgeons believe. It would certainly seem to be true that in many cases of perityphlitic inflammation, involvement of Velpeau's membrane—the extra-peritoneal cellular tissue—has much to do with the peculiarities of the resulting abscess. A point which seems to me of some importance and which was brought out in a very positive manner by my friend Dr. McMurtry, of Louisville, in a paper before the Southern Surgical and Gynecological Association in 1891, is the arbitrary assertion that the inflammatory process and resulting abscess in cases of inflammation about the caput coli are always intra-peritoneal. This assertion is based upon the recent anatomical dissections of Treves, Bull, and others, which seem to show that the appendix and cæcum are wholly within the peritoneal cavity. It has also been shown by such operators as McBurney and others, that the abscesses are usually intra-peritoneal. This assertion requires qualification, for general practitioners will very often allow a perityphlitic abscess to rupture spontaneously, either externally—which happy event occasionally occurs—into the cæcum, or, with an almost inevitably fatal result, into the peritoneal cavity, because of the horror which men of small experience in abdominal operations have of the peritoneum. In other cases the abscess will be allowed to burrow in various directions to appear at some point far distant from the original focus of suppuration. These disagreeable results are permitted in the face of the fact that a simple incision into what is practically an ordinary abscess would prevent them. A pointing perityphlitic abscess—intra-peritoneal though it may be—is practically extra-peritoneal because if the barrier of lymph, young connective tissue, and agglutinated intestine that shuts it off from the general peritoneal cavity. This point I believe to be of paramount importance. In some cases it would appear that the inflammation may agglutinate the peritoneum about the appendix, and form an abscess of small size which perforates through the retro-peritoneal cellular tissue. This appears to me to be the explanation of the tardiness with which some abscesses in this location come to the surface. Instead of the induration being at once manifest it may be some days or weeks before it can be detected with any degree of positiveness. The abscess meanwhile burrows along the planes of cellular tissue in the iliac fossa to the ileo-lumbar region and may appear at some distance from the head of the colon, or may gradually burrow outward toward the loin and downward and upward in the direction of the groin until at one or both points it becomes perceptible to the touch. In several cases in which I have operated, I have every reason to believe from the conditions present that the process was extra-peritoneal, and that the abscess had burrowed up in the direction of the kidney as well as downward into the iliac fossa. The point which I wish to emphasize is that even though these abscesses be considered *ab initio* intra-peritoneal, the operator must not lose sight of the fact that in some cases he can do what is practically an extra-peritoneal operation, for there is at least a barrier produced by adhesions which shut off the collection of pus from the general abdominal cavity.

In view of the prominence which inflammation, gangrene and perforation of the appendix has been accorded in the etiology of suppurative processes about the caput coli, it may seem rather bold to express a belief in the occurrence of such inflammatory troubles without such serious disease of the appendix. It must be admitted that such cases very often get along very well without operation, and perhaps do not even suppurate, but this should be accepted as at least a partial explanation of the arbitrary position of the surgeon. The cases in which serious disease of the appendix exists must come to suppuration and should, as a rule, be operated upon, while in many of those in which the appendix is not involved to a serious extent, conservative measures may succeed with the result that the surgeon has no opportunity of examining the case. I think that general practitioners of experience will be inclined to recognize cases of inflammation about the colon which do not begin in the appendix *per se*, but have for their starting-point inflammation in the colon proper. I can see no reason why this inflammation may not extend to the cellular tissue outside of the colon without there being necessarily any perforation or even any suppuration. This extension of inflammation, I believe, does occur and in all likelihood is the result of infection. A comparative study of the bacterium coli com-

mune and pyogenic microbes may in the future shed some light upon the subject. The close similarity or, as is claimed by some, identity of the two forms of microbe is suggestive to say the least. Whether inflammatory conditions in and about the appendix and colon may give rise to evolutionary changes in the bacterium coli commune by which it acquires properties of infection and pyogenesis, is at least an open question, and one upon which the bacteriologist is alone competent to pass an opinion.

The relation of foreign bodies to appendicitis and the pathological processes secondary thereto, might be considered to be quite definitely settled were it not for the fact that every now and then contributions to medical literature appear in which foreign bodies are assigned a very unimportant place in the etiology of the disease. Within a year I heard a prominent abdominal surgeon state, that in his opinion foreign bodies were very rarely the cause of perforation of the appendix with resulting abscess, he citing a number of cases in which he had evacuated large abscesses in this situation and had removed the appendix, and had not been able to detect a foreign body of any kind. I was not convinced on listening to this gentleman's description of the cases that they conclusively proved that foreign bodies were not present even in them. A foreign body of very small proportions is doubtless sufficient to cause appendicitis and it is conceivable that the finer fruit seeds and even foreign bodies of a large size might easily be overlooked in the cavity of the abscess or the pus which discharges therefrom. A foreign body is, as is well known, not necessarily of extraneous origin. It is probable that in some cases of appendicitis a catarrhal colitis is the point of departure for the pathological process. Obstinate constipation may lead to a catarrh of the colon, which process extends to the appendix with a resulting slight swelling of the appendico-cæcal opening. The resulting formation of a fæcal stone is so well known that I would not repeat it were it not necessary to a complete presentation of the subject. Mucus collects in the appendix, a small amount of fæcal matter gets into the tube during straining at stool, and fails to get out again, and forms in combination with the mucus a small fæcal stone. Sometimes this fæcal stone is formed in the cæcum and is forced into the appendix, although it is probably most often formed in the appendix proper. A practical point in this connection, to which I believe attention has not been called, or at least if so, it has not been brought to my attention, is that in certain cases of inactivity of the colon with resulting constipation and catarrhal colitis, abdominal massage, which is so frequently recommended and which is so often beneficial in constipation, is apt to be a source of danger. A small portion of fæcal matter may be forced through the partially stenosed appendico-cæcal opening, and once imprisoned in the appendix it will become as truly a foreign body as though it were of extraneous origin. The fæcal stone may set up a varying degree of inflammation of the appendix according to the degree of distension of the little tube. Frequently, as is well known, it perforates and produces inflammation and suppuration about the head of the colon. It is probable that in some cases the fæcal stone dissolves in the resulting pus formation, and this would seem to be the explanation of many of those cases in which perforative ulceration of the appendix is found and yet no foreign body is discernible in the pus sac. It is not impossible that in every case where perforation occurs there has been a foreign body of some kind. Many cases of appendicitis remain catarrhal, and may cause little or no disturbance of the patient's health. The frequency of this condition is well shown by Fitz in his analysis of 72 cases in which appendicitis was probably not suspected during life.

With regard to the dependence of appendicitis upon foreign bodies, a very interesting case was reported by my friend, Dr. C. A. L. Reed, of Cincinnati, in the Transactions of the Southern Surgical and Gynecological Association for 1890. He was called to see a fine, stalwart woman, who had been troubled with constipation for the relief of which she had taken a regular diet of compound cathartic pills. She had suffered for two weeks with inflammation about the caput coli, the diagnosis of which was indisputable. Laparotomy disclosed a very large pus cavity; this was opened and irrigated; the appendix had disappeared, and in the cavity of the abscess were found half a dozen of the compound cathartic pills. While I am speaking of the relation of foreign bodies

to appendicitis, some members of this society are doubtless recalling cases, either personal or reported in the journals, in which perforation, gangrene, and perhaps spontaneous amputation of the appendix has occurred, yet no foreign body has been discoverable. It might not be amiss in this connection to again suggest the readiness with which a foreign body may be overlooked and the possibility of a fæcal stone dissolving in the resulting pus. No one has yet made clear the reason for such an intense inflammation affecting a structure anatomically and functionally so unimportant as the appendix vermiformis. Leaving out of consideration some special type of infection or the impaction of foreign bodies, such pathological processes, to say the least, are difficult of explanation.

Causes:—The causes of inflammation in and about the head of the colon may be summed up as: (1) Fæcal impaction. (2) Fæcal stone. (3) Extension of catarrhal colitis with occlusion of the mouth of the appendix. (4) Foreign bodies of extraneous origin. (5) A possible primary infection of the appendix and the tissues about it by pus microbes. (6) Traumatism. The latter cause may be disputed, but I have observed one case in which it appeared to be the starting-point of the disease. It is not difficult to appreciate the possible importance of traumatism. A blow upon the abdomen over the distended colon might, it seems to me, give rise to a bruising of the colon with resulting inflammation, which may extend to the appendix and the retro-peritoneal cellular tissue, or may cause extrusion of fæcal matter into the appendix with resulting fæcal stone and its sequelæ. The relation of fæcal impaction in the colon to perityphlitic abscess is possibly more important than is generally believed. In two cases of my own in which an abscess resulted, and in which I performed an operation, there had been no constipation before or during the patient's illness, yet some days after the operation a large fæcal mass descended into the rectum, and I was compelled to remove it in each instance by mechanical means. As the patient had been having a stool daily under the use of salines, the most likely point at which this fæcal mass could have formed was the caput coli. I can appreciate the possible objection that the impaction was the result rather than the cause of the inflammation. It is a noteworthy point that perforation of the appendix results so often in a limited inflammation, while perforation of the stomach is immediately and almost inevitably followed by a fulminant peritonitis. Mynter explains this, by the more active peristalsis of the stomach and small intestine, which results in a more speedy and liberal distribution of the infective matter over the peritoneum. The comparatively small calibre of the appendix and the slight *vis-a-tergo* imparted by the small quantity of fæcal matter in its lumen, constitute a more logical explanation. Both factors are probably operative.

Experience at the bedside and autopsy table, has permitted of a tolerably definite classification of appendical inflammations. One of the best classification is that of With, of Copenhagen, which is as follows: 1. Peritonitis appendicularis adhæsiva; 2. Peritonitis appendicularis localis; 3. Peritonitis appendicularis universalis.

Diagnosis.—The diagnosis of perityphlitic abscess is confessedly not always easy, as it is shown in one of my own cases in which I stood ready to operate, the symptoms pointing clearly to the existence of pus, and the fullness of the ileo-cæcal region and tenderness at that point seeming to warrant an operation. In this case the patient recovered after the passage of a large amount of fæces. Fitz reports a case of circumscribed peritonitis in the right iliac region diagnosed as appendicitis, which was afterward proven to be on autopsy abscess of the liver due to catarrhal colitis. In a second case, diagnosed as appendicitis, the post-mortem disclosed a suppurating sub-peritoneal gland, due to gonorrhœal infection. In a third case pyosalpinx was mistaken for appendicitis. In a case of my own, appendicitis existed with a small abscess, but all of the symptoms which existed prior to the operation have persisted for a long time, and were due in all probability to spinal irritation. This case was not operated on by me, but was under my care some months after the operation, and finally drifted into Dr. Senn's hands, and was, I understand, cured by spinal counter-irritation. A valuable point in diagnosis in obscure cases is the fact, that when an abscess, forming about the caput coli, tends to burrow upward toward the kidney, there will be

marked irritation of the psoas muscle, marked flexion of the thigh, crural neuralgia, and great pain on attempts at straightening the limb. Dr. McMurtry, in his excellent paper already alluded to gives this as one of the typical signs of appendicitis, but I have not observed it as a prominent symptom excepting in cases in which the abscess had had a tendency to burrow in the direction indicated. In these cases the diagnosis was not positively made early in the case, and this symptom came on only after the abscess had in all probability opened into the retro-cæcal cellular tissue and developed a secondary pus sac in that situation.

One of the things that the general practitioner is likely to do when he discovers an induration characteristic of perityphlitic inflammation, is to plunge the needle of an aspirator or hypodermic syringe into the mass. I never could understand why the practitioner should do this, for as a rule he does not intend to operate when he finds pus, and the inspection of a few drops of stinking pus is not likely to give very much assistance in a diagnosis which is already clear. If the pus has not formed, the induration not only does not require aspiration, but there is danger of infecting the peritoneum by the needle. If pus has formed, aspiration does no good, and there is still greater danger of infection. Very often the aspirator is relied upon as the crucial test for the diagnosis and an operation is decided against because pus is not withdrawn by the needle. As a matter of fact, however, it is difficult to get at the pus with a needle excepting in those cases in which the abscess has fortunately come forward in the direction of the anterior abdominal wall. Even in these cases, if the anterior peritoneum is not agglutinated to the abscess sac, the introduction and withdrawal of the needle may be followed by infection of the general peritoneal cavity, septic peritonitis, and death. Aspiration then, may be set down as on the average dangerous and about as logical as the performance of the ostrich who seeks safety by sticking his head in the sand. If the practitioner is not secure in his diagnosis, and is not capable of doing abdominal work, he should not be deluded into a show of industry by the facility with which he can jab a needle into the induration in the iliac fossa. Are there any circumstances under which aspiration might be advisable? When the pus has come well forward and the abdominal tissues are involved in the agglutinating process of the abscess walls, and it is necessary to convince the patient or the physician in charge of the necessity of an operation by an impression upon the ocular or olfactory apparatus of the doubting Thomas, aspiration may be prayerfully considered.

One of the most important points in connection with appendicitis is that many cases of so-called idiopathic peritonitis are dependent upon a fulminant attack of appendicitis which spreads so rapidly to the general peritoneum that acute peritonitis occurs and masks the primary trouble in the right iliac region. It is probable that in many children who are said to have idiopathic peritonitis there has really occurred primarily, inflammations about the appendix. In children, however, the inflammation may extend to the sensitive peritoneum so rapidly that a fulminant peritonitis results and destroys the little patient's life long before the period of pus formation, while in the adult suppuration and a distinct tumor will be observed. The more carefully these cases of peritonitis are studied, the narrower the range of idiopathic peritonitis becomes. Appendicitis and traumatism are often at the bottom of so-called idiopathic peritonitis. One of the cases which I shall shortly relate was probably an illustration of the rapidity with which the inflammatory process in the appendix will extend to the general peritoneum. Many times perhaps, general peritonitis has been preceded for some time by inflammation of the appendix of a low grade, the symptoms of which have not been sufficiently prominent to attract attention. Suddenly, however, gangrene or perforation occurs with resulting infection of the general peritoneum, and within a few hours the patient is in the agonies of what is labeled "Idiopathic Peritonitis."

Should the mortality rate reported from operations for perityphlitic abscess be an arbitrary guide in deciding the question of the advisability of an operation? It would seem not. Each case should be judged upon its own merits and an occasional error in judgment should not condemn conservatism on the one hand, or operation on the other. Operation for the results of appendicitis

necessarily varies in its gravity with the condition present. Thus it may be (1) surgically extra-peritoneal, albeit it may be anatomically intra-peritoneal. (2) Intra-peritoneal, the condition being nothing more nor less than a septic peritonitis, the operation perhaps being preformed when the patient is in a desperately bad condition. (3) The appendix may require resection. (4) The operation may be no more formidable than the evacuation of an ordinary abscess, the latter being the kind of cases in which some operators have achieved their greatest glory. (5)The appendix may be removed in the interval between the attacks of recurrent appendicitis. Obviously the mortality rate will vary greatly in these conditions. The mortality of appendicitis, as recorded up to date, is extremely severe. Fitz, who has reported more cases than any other writer, states that 74 per cent. of cases have recovered and 26 per cent. have died, about one half of these cases being treated medically and the other half surgically. As McMurtry remarks, "this indicated that those treated surgically were operated upon late in the disease," which may have meant that the patients were practically moribund. The late operation has had the enormous mortality of 50 per cent.

It is not my intention to expatiate upon the treatment of inflammation about the caput coli. There are some points, however, that will bear mention. It is probable that the tendency in such cases is to overdose with opium, while perhaps the objections which apply to the use of opium in general peritonitis do not apply so pertinently to the localized inflammation under consideration, it should, at the same time, be used with extreme caution. Should pain be severe morphia hypodermically in moderate doses may be warrantable, but great care should be taken—especially in administration by the mouth—lest the digestive organs be disturbed and vomiting result, which might prove disastrous to a patient in this condition. As a rule, local applications will accomplish the desired analgesic effects. Piping hot poultices, sprinkled liberally with laudanum, are always in order. An application which has in my hands proved a desirable substitute for the internal administration of opium in abdominal affections of a painful character, is an ointment with lanoline for a base, to which is added menthol, extract of aconite, belladonna, and extract of opium in considerable strength. Salines in full and frequent doses constitute, it seems to me, the only rational measure of internal medication.

Selection of Cases for Operation.—Wylie has stated that, "should the symptoms of a local peritonitis in the region of the cæcum not begin to improve by the fourth or fifth day from saline treatment and local applications over the seat of the inflammation, an incision should be made down through the muscles and the peritoneum dissected up until a place is found where the abscess is attacked, when it should be opened. While the operation would be less difficult if delayed, the danger of the abscess rupturing and producing acute septic peritonitis must be borne in mind, hence an increased difficulty in doing operation is more than compensated for in the risk saved the patient." McMurtry says: "Operation involves less danger than delay, and should be resorted to in all cases in which the high grade of inflammation is persistent." The essential of the operative technique according to this authority are "brief anæsthesia, quick and thorough work, removal of the appendix, irrigation and drainage." From my limited experience of observation of these cases, I believe that the safest guides are the pulse, temperature, degree of sensitiveness of the region involved, and the rapidity with which the induration occurs. Cases of the fulminant type, such as occurred in one of Chicago's well-known citizens, which was operated upon by Dr. McBurney a short time ago, demand immediate operation, and should be regarded in the light of a septic peritonitis from a surgical standpoint whether general involvement of the peritoneum has begun or not. Many cases will occur in which conservative measures are indicated, but in every such instance the attending physician should call a capable surgeon into the case in order that the operation, if indicated at all, may be done sufficiently early. In cases which are seen after fluctuation has occured, or when there is no fluctuation but agglutination of the mass to the structures of the abdominal wall, or in any case in which we are reasonably certain that pus has already formed, operation should be performed at once if the purulent collec-

tion is at all accessible. The pus should never be allowed to select its own exit, for while it may burrow in a favorable direction and open spontaneously at a favorable point, we have no assurance that it will do so, and our duty is to make a favorable point for it. A conservatism which permits an abscess in any of the great cavities of the body to knock at all doors in the neighborhood in the attempt to find the point of least resistance with the results oftentimes of escaping at a door which opens into some vital structures or organs of the body, is not the kind of conservatism that is must conducive to our patient's welfare.

As for the appendix, the statement made in Dr. McMurtry's paper, that it should always be removed is probably too arbitrary. Many cases recover after the evacuation of the abscess without removal of the appendix and without subsequent recurrence of the inflammatory process. Cases recover spontaneously by discharge of the pus into the bowel or externally without recurrence of the disease. The question should be decided not in a routine manner, but according to the conditions which the affected part presents. The site of the incision in operations for the relief of appendicitis and its sequelæ has been the source of some discussion, some surgeons advocating a perpendicular incision, others one corresponding to the direction of Poupart's ligament, and still others a combination of both. It would seem that we have here another opportunity for the differentiation of cases. Where there is a palpable tumor its axis is very apt to be in the general direction of Poupart's ligament, and under such circumstances an incision as for the ligation of the external iliac is advisable. Under other circumstances it may be preferable to make a vertical incision over the caput coli or perhaps combine the two incisions, a proceeding which is very apt to be necessary in order to expose and remove the appendix.

In presenting this general survey of inflammations about the caput coli, there has been no attempt at completeness. If I shall have succeeded in stimulating a discussion on the more important practical points—which points have been aptly illustrated by cases in my own moderate experience—I shall have accomplished my object.

Clinical Lectures.

ABDOMINAL GROWTHS.*

By E. E. MONTGOMERY, M. D.,

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Ladies and Gentlemen: The Patient I bring before you is a woman, twenty-one years of age, servant, unmarried, whose father died of acute alcoholism, and mother and four aunts of phthisis. Her childhood was uneventful; puberty occurred at twelve and menstruation has always been prolonged, lasting seven to ten days: occurs without pain. She has been able to work until her present sickness, which began fifteen weeks ago, when she suffered pain in the lower part of the abdomen, particularly in the hypogastric region. This has been greatly increased by pressure; appetite has been poor. She has been treated during this time for a quite severe bronchial attack attended with a hard, painful cough. I saw her yesterday for the first time in the ward. As I expose the abdomen you will notice that the lower portion of it is a little more prominent. In palpating over the abdomen I have to exercise the greatest care on account of its being so tender. This mass extends to about the level of the umbilicus. It is situated in the central part of the lower abdomen, extending equally distant on either side of the median line, consequently is a symmetrical tumor. Now, it is important to remember in connection with this distension, that there has been a continuance of her menstruation and that during the last few months when this tumor has been increasing in size, the menstrual flow has been excessive, almost hæmorrhagic in character. There is no variation in its occurrence from the normal periods, but the duration is longer. As I make pressure over the lower part of the abdomen, I find it exceedingly tender. The patient is very nervous and consequently contracts her recti muscles. Examining in the ward yesterday I found

*Delivered at the Philadelphia Hospital, October 8th, 1892.

that the finger could be pressed between the mass and the symphysis, and in examination of the vagina, the tumor was apparently continuous with the uterus, forming an angle between the anterior wall and the cervix, showing that the development was in the uterus itself. From what I said to you in the last lecture upon the subject of the diagnosis of abdominal conditions, you will recognize this trouble must come from some disordered condition of the viscera situated in the lower portion of the abdomen. Now, a growth of this kind consequently, might be in the uterus, the tubes, the ovaries, or from malignant disease of the rectum, or of the retroperitoneal pelvic glands. Finding the disease situated in this part of the abdomen, it became a serious question to decide as to which particular organ has been the source of its development, and to arrive at some idea of the subsequent progress of the condition. This knowledge will be of advantage in determining whether interference shall be instituted, and when it should be done.

If the tumor arose from the ovary we would expect to find at this period of this growth that it would be situated lower down in the pelvis; more to one side than in the central position. It would more than likely present a certain sensation of fluctuation or at least elasticity, and not the dense, hard feeling that is presented by the mass now under observation. It is true that we may have solid tumors of the ovary, either fibroma or sarcoma, but such growths would without question be situated lower down in the pelvis and to one side of the uterus. The uterus could be outlined and separated from the growth, unless it was closely attached to it; even in such cases the uterus could be felt upon the tumor, rather than forming a part of it. An ovarian fibroid, and more particularly the sarcoma, is likely to give rise through its pressure upon the pelvic vessels, to accumulation of serum within the pelvis and abdominal cavity; in other words to an ascites. We remember, also, that the ovary may be the seat of a growth known as a dermoid tumor, which from its contents presents a sensation of considerable resistance and may be mistaken in those cases where it is closely attached to the uterus, for a fibroid growth. Where the tumor is closely attached to the uterus, so much so as to be difficult to be separated from it, we will find it situated to one or other side or posterior, while the mass we have in this case seems to develop more particularly in the anterior wall of the uterus and project in front of the cervix.

The dermoid cysts already mentioned arise from folding in of the epi- and mesoblasts in the embryonic life of the individual, and the presence of these abnormal tissues may result through the slightest irritation, in the development of large tumors. The cysts may occur at any time in life, as I recently removed one quite large in size which involved both ovaries from a girl of eleven years. They are seen also in women as old as seventy. Where these tumors are situated beneath the broad ligament and push it up in front of them, the diagnosis may be extremely difficult to determine between them and tumors situated in the uterus itself. We are only able to determine, by careful observation of the peculiar sensation presented by the tumor and by its situation.

In the patient before us we find the tumor is situated anterior to and projects over the cervix, consequently we are not likely to have an ovarian tumor, or a tumor developing from the broad ligament, as these would assume a different relation to the uterus itself. That it is sometimes exceedingly difficult to determine ovarian tumors from those involving the uterus is self-evident. In this hospital some years ago I had a patient under my charge, in whom there was a development of a tumor in Douglas' pouch, which had pushed up the uterus and bladder in front of it and in its enlargement had displaced downward and forward the posterior wall of the vagina until it projected, a large surface, from the vulvar orifice, pushing the posterior wall of the vagina with it. In introducing the finger to reach the cervix it had to pass over this mass, which was elastic and not hard. The tumor had pushed the uterus and bladder up to such a degree as to interfere with the evacuation of the latter organ. The posterior wall was rendered so tense that it seemed to be continuous with the uterus and hence diagnosis was made of possible fibroid cystoma. The patient died two days later from pressure upon the pelvic viscera, when an autopsy disclosed that the tumor in the pelvis was an ovarian cyst which had formed extensive adhesions and had developed to considerable size in this situ-

ation. The contents of the ovarian cyst were thick and viscid. It was firmly adherent in the pelvis, and could have been readily emptied through the vagina and the cyst wall thus enucleated without any difficulty to the patient.

A case comes to my mind in the practice of another physician in which the patient had a tumor, with the abdomen symmetrically developed. The tumor had remained in existence about eleven months. During this entire period she had not menstruated. Palpating the abdomen, a sensation of elasticity could be determined without fluctuation. On sight this tumor was so tense as to leave us in doubt whether it might not be a distension of the uterus; this, taken together with the fact that the woman had not menstruated led us in spite of her denial to consider pregnancy as a possibility; but upon exploratory incision, the glistening appearance of the surface of the tumor disclosed that it was undoubtedly ovarian. Even vaginal examination was insufficient to enable us to determine distinctly that the tumor was separate from the uterus. Exploratory incision was made which revealed a glistening surface of the tumor and at once impressed us that we had to deal with one which had originated from the ovary. A trocar was plunged into the tumor without procuring a drop of fluid. The opening was then enlarged and the tumor turned out and proved to be an ovarian tumor and subsequent examination disclosed the fact that it was a tumor made up of an immense number of small cysts, apparently a tumor in which every Graafian follicle had undergone cystic degeneration, and these enlarged follicles contained within the sac formed the tumor itself.

In tumors of malignant character, the relation to the uterus is sometimes so close as to render it possible to determine their character only by exploratory incision. These cases, however, only accidently come under consideration at this time, for the reason that here the tumor is situated anterior to the uterus, or folds over the cervix, and consequently we must exclude the possibility of it being ovarian, and for the same reason we would eliminate tubal tumors. In tumor of the tube, it is generally elongated as well as enlarged. The history does not present the symptoms of suppuration, hence we narrow down the possibility of the growth in this individual instance to that of tumor of the uterus, or one which may develop in its immediate proximity. In this respect we should not forget that we have tumors in the retroperitoneal glands which may attain to as large a size as those involving the uterus. Retroperitoneal tumors are rare, but that they do occur, however, I have found in a recent case to my cost. The patient was a woman eighteen years of age. She came into the Jefferson Hospital a short time ago with her abdomen quite largely distended, and with a history of trouble having occurred some nine years ago following an attack of mumps. It was a very natural inference that there had been a metastasis of the mumps to the ovaries and that this patient had developed an ovarian tumor as a result. It was possible the tumor might be one of the dermoid variety. It felt like a dermoid for the reason that sensation of fluctuation was indistinct, one of elasticity rather than fluctuation. But such tumors are found posterior to the uterus, while we find in this patient the posterior fornix is free. The tumor just described was not very movable, which is not surprising in a young woman in whom the muscular structures are firm. Vaginal examination or rectal examination was not made. As I look back over the case from a later history, I do not see where either would have afforded any special advantage in determining the character of the growth. The abdomen was opened with the expectation of removing an ovarian tumor. As soon as the peritoneum was opened the appearance of the tumor—more or less lobulated—led me at once to realize that it was not an ovarian. A trocar was plunged into it, presenting a sensation of fluid within it. It was so elastic that we could not believe that it did not contain fluid, possibly of a thick and viscid character. Not a drop of fluid, however, came through the trocar. The abdominal incision was then enlarged and the tumor drawn out. It was found that it was held down by the peritoneum at the level of the base of the pelvis, the peritoneum projecting over it upon each side. The uterus was attached at its anterior surface and lifted to a considerable extent above its ordinary level. It was drawn out and lengthened as the result of the growth of the mass. The peritoneum was cut through just behind the uterus and the latter very quickly torn

off from the surface of the tumor. Passing the hand behind the uterus it went into the structure of the mass and the upper part of it was torn through; following the uterus down, the inferior mass was enucleated or shelled out, showing a large granular mass. The pelvis was carefully cleaned and packed with iodoform gauze, stitching the peritoneum with the upper part of the sac about it in a way that the discharge could not enter the peritoneal cavity. The patient only survived the operation a fraction of an hour. In this case vaginal examination would have disclosed but little, as there was no way in which we could have told that the tumor was situated posterior to the peritoneum until an exploratory incision was made. Even vaginal examination would have led me to suppose that I had to deal with an ovarian cyst with thick, viscid contents that had developed in the pelvis, had increased in size and through its attachments to the uterus dragged that organ up with it. Such tumors are exceedingly rare.

Vaginal examination in the patient before us discloses the fact that we are able to pass the finger behind the uterus and that the mass is continuous with the cervix posterior and anterior, so we exclude the possibility of this being a retroperitoneal tumor. Now tumors that occur in the uterus you would recognize are those more particularly of the structure of the uterus itself and hence are known as fibroid or myomatous tumors. They are due to some local irritation of tissue in the uterus, which develops more rapidly than the other portions of the uterine structure. The connective tissue becomes thickened until the tumor itself is more or less isolated from the remaining structure of the abdomen, having a distinct capsule. The tumors of the uterus differ somewhat in their histological structure. Thus, we have some in which the tumor attains to large size, is quite elastic, does not give a sensation of resistance and density, in which the structure of the tumor is similar to that of the uterus, consequently they are known as myomata or soft fibroids. Where the tumor is of slower growth it pushes about the connective tissue which forms a capsule from which the tumor can be readily enucleated. These are tumors which have become mature. Fibroid growths may occur singly or more frequently in groups, or a number of them in the same uterus. They vary in size from a millet seed to those weighing nearly a hundred pounds. Such a tumor as it increases in size is a source of discomfort to the patient, gives rise to organic changes in the structures whose functions are interfered with. A tumor in its early development may be pressed down into the pelvis giving rise in this way through pressure to interference with the action of the bowels and rendering voiding of urine difficult if not impossible. Indeed, many cases are discovered through the effort at at emptying the bladder in cases of urinary retention. Tumors of the uterus are also divided according to their situation in the structure of the organ; thus, those tumors which have their origin in the layer of the muscular tissue near to the peritoneal surface, are crowded out beneath the peritoneum as they increase in size, and become known as subperitoneal fibroids.

On the other hand, if they are situated near to the mucous membrane of the uterus and its cavity, as they increase in size they press into the cavity leading to the formation of a tumor known as submucous, which may be a polypus or a growth having for its attachment or base the entire wall of the uterus, when it is known as a sessile tumor. Those tumors which are situated in the wall of the organ equally distant from the mucous and subperitoneal surfaces form what are known as mural or interstitial tumors. These divisions, then, into submucous, subperitoneal, and interstitial tumors are not variations in character, but are only used to distinguish their situation and relation; they are all histologically the same. Upon the situation of the tumor will depend the subsequent symptoms arising from its presence. One which occupies the cavity of the organ and is pushed into it, will often-times distend the cervix and lead to its expulsion from the cavity of the organ. These growths distend the cavity of the uterus and are covered with the mucous membrane which they carry before them. This membrane becomes thinned, the vessels attenuated or varicose, the surface of the mucous membrane is ulcerated and the patient consequently is likely to suffer from hæmorrhage. First, the periodical flow will be greatly increased, last a number of days; later one will find the patient bleeds upon the slightest irritation. In such cases hæmorrhage is a marked symp-

tom. It may occur as an aggravated flow or take place during the intervals. I am inclined to believe that the tumor in the present instance is an interstitial one involving the greater part of the anterior wall of the uterus; this for the reason that it is found to project over the cervix. If it were situated in the posterior wall it would very likely lead to retroversion of the uterus. The tumor, however, of late has begun to encroach upon the mucous wall of the uterus, interfering with the circulation and consequently caused a prolonged menstrual flow, gradually increasing and at times quite free. The only condition with which this might be confounded would be that of pregnancy; the existence of menstrual flow is not necessarily a contra-indication, for it must be remembered that some women continue to menstruate during the entire period of pregnancy. I have a patient who, for several years, has believed herself pregnant whenever she has an excessive menstrual flow. This is the first indication of her pregnancy and for the first three months she is subject to more or less hæmorrhage at the time she should menstruate.

I remember, during my term as resident in this house, a woman who menstruated regularly during the entire period of her pregnancy and gave birth to twins.

Pregnancy is eliminated in this patient for the reasons, first, that there is an absence of any history, and second, this hæmorrhage has been going on for a number of months longer than we would expect it should for so slight a distension of the abdomen as is here present. Then, again, we do not have the physical signs of pregnancy in the uterus itself. The uterus is firm, more tense than is the pregnant uterus. Then palpation and auscultation will serve to complete the diagnosis. We are forced to the conclusion that we have to deal with growths in the uterus and that the immediate growth is mural or interstitial. As the tumor increases it will give rise to more or less discomfort. It will press upon the structures about it. The size to which the tumor has attained and its situation is such that it is not likely to give rise to the same pressure upon the pelvic viscera as if it were situated lower. As they increase in size, however, they give rise to pressure upon the intestines and blood vessels, the latter causing changes necessarily in the structures supplied by them. They not unfrequently press upon the ureters running into the pelvis upon either side and this pressure gives rise to distension of the tube, later to distension and destruction of the kidney structure. I have seen instances in which the kidneys have become sacculated as the result of such a pressure. It was a wonder that the patient had been able to survive with such a marked diseased condition.

We come now to the consideration of the question as to what should be the course of treatment in such a case. Shall the patient be subjected to an operation which shall remove the uterus itself, or shall we be content with the removal of the ovaries, or simply treat the symptoms, making her if possible more comfortable, or shall we instead attempt to remove the tumor through the uterus itself? These questions present themselves for our consideration and determination. Medical treatment in such cases has been unsatisfactory; the remedies which have most effect upon the growth are those known as the oxytoxics; that is, remedies which cause contraction of the uterus, such as quinine, ergot, extract of cotton root, and remedies of a similar character. Of these, ergot exerts the most beneficial influence and acts in two ways: first, by causing contraction of the muscular fibres of the uterus itself, and thus decreasing the amount of blood sent into the organ and increasing the ability of the organ to extrude the foreign body from its walls and hasten the time when by this extrusion the tumor ceases to increase in size; second, it has an influence upon all involuntary muscular structures, in that way decreasing the amount of blood sent into the tumor itself.

Other remedies have been administered with a view of limiting the growth of the tumor by producing processes of retrogression similar to those which sometimes take place under the direction of Nature alone. The most important of these is that of the calcification of the tumor. The tumor becomes calcified by the deposit of calcareous material in its structure. An early lecture recounts numbers of cases in which the patients have had extruded from the uterus and vagina calcareous masses which were denominated as uterine calculi.

These, however, were simply tumors which had undergone calcareous degeneration and had been subsequently extruded. To accomplish this purpose, Sir James Y. Simpson proceeded to administer the chloride of calcium in large doses. It was soon found, however, that the action of this agent could not be confined to the uterus, but that it gave rise to deposits of calcareous material in the coats of the vessels and in the valves of the heart. In intrauterine tumors ergot exerts an influence in hastening the time at which the tumor is extruded from the uterus by dilatation of the cervix. It should be remembered, however, that ergot is not an absolutely safe remedy, as through its action it may lead to the too rapid extrusion of the tumor through the uterine walls, whether subperitoneal or submucous, and cause sloughing, with the development of septic symptoms, whether the tumor undergo necrosis or death in the uterus or in the abdominal cavity.

I have seen two cases, in one of whom I believe the extrusion to have taken place, so that the peritoneum and the tumor lost its vitality. The patient died from septic peritonitis. In another case the tumor was a submucous one, but had undergone loss of its vitality and produced considerable elevation of temperature. The tumor was removed, was found to be an offensive necrotic mass, and the patient subsequently died of septic poisoning. Recently a patient came under my observation, fifty years of age, suffering from profuse hæmorrhage which had occurred during the last year. The condition was such as to lead me to infer the possibility of malignant disease. Upon examination the vagina was found filled with a mass nearly as large as my fist. Passing the finger up to the cervix, which could be done with difficulty, it was found that the cervix encircled the projection. It became a serious question whether we had to deal with a polypus or an inverted uterus. Examination under ether, however, disclosed that it was a fibroid polypus hanging by a pedicle from the side of the cervix. It was twisted off and the patient has subsequently done well. Such cases have not frequently been subjected to manipulation with a view of the return of a supposed inverted uterus which was subsequently found to be a fibroid polypus. In the cases in which the tumor is extruded from the uterus, there is not a question of doubt as to how the mass should be treated. Where the tumor is situated within the uterus, and the cervix can be dilated, it should be separated from the wall and twisted out. Where the cervix is as yet undilated, the question becomes one of considerable interest and if it is found that the tumor has no pedicle and is situated in one wall of the uterus as a base or projecting into the uterus, it becomes a serious problem how it shall be treated. If the tumor is not too large, the cervix may be dilated and split up on either side to the vaginal fornix when the dilatation will be more rapidly accomplished. The tumor is seized with a firm pair of forceps, preferably a Volsella, and then with the finger enuculeation is accomplished as far as can be reached. This should be followed by grasping the tumor, twisting until it is turned out of its bed, or the enucleation may be accomplished by the use of the serrated spoon curette of Thomas. These are cases in which the operation is attended with the greatest difficulty and considerable traumatism of the cavity of the uterus. The large cavity left by the removal of the tumor is likely to fill up with blood and subsequently become infected, consequently renders the plan of procedure exceedingly dangerous. It is very undesirable to leave the uterus to fill up by clots of blood. The preferable plan of procedure would be to pack the cavity of the uterus with iodoform gauze. The end of this may be left out of the cervix, and the cervix, where incision has been made, may then be removed at the end of forty-eight or seventy-two hours and intrauterine irrigation is practiced, taking care to afford opportunity for a return flow of the fluid. If the cervix is not sufficiently dilated to permit of the extrusion of the tumor, the latter is dragged against it and held with firm pressure. The cervix will be found to slightly dilate and permit the extrusion of a very large tumor. The gauze packing before mentioned in these cases serves a double purpose; it acts as a drain, by its presence as a foreign body, stimulates the contraction of the uterus, and promotes the elimination of septic material through the activity of the transudation of serum toward it. The treatment in those cases where the tumor has attained to considerable size, I hope to discuss before you in a subsequent lecture.

Communications.

CROUP, DIPHTHERIA AND SCARLET FEVER.*

By F. LEONHARDI,
DRESDEN, GER.

These three diseases have attracted my special attention for some time past. In 1854 I presented a communication before the Dresden Gesell. f. Naturn. Heilkunde, on the subject of Tracheotomy in Croup, after my first successful operation in 1852 done for croup (the sixth at that time done in Germany). In 1888 I combined Croup and Diphtheria in an article and 1891 I gave my views on Scarlet fever, and it is now my purpose to combine my knowledge of all three diseases in one communication.

The question so often discussed, that the old Laryngeal Croup, the Angina membranacea, Agnina couenneuse, and the Diphtheria, which has made its habitat among us since 1862, are one and the same thing, the only difference being the grade of infection and the organs attacked, I cannot accept. *There always were and there are yet, cases of pure inflammatory croup*—non-contagious, brought about by local irritations of the mucous membranes by cold, wind, chemical irritants, etc., for instance, hydrochloric acid fumes, strong ammonia, etc. It originates in the larynx and extends to the air passages, may take a rapid or slow course accompanied by catarrhal fever. Tracheotomy produces better results in these cases than in diphtheria, I have performed this operation in eleven cases of inflammatory croup with five complete recoveries; in diphtheria the mortality rate is higher. Inflammatory croup was described first by Francis Home, 1765. Broussais, in 1829, opposed Bretonneau's theories regarding its identity with diphtheria which has since been accepted by more recent writers and practitioners, Henoch, Waldenburg, Oertal, Francotte, etc. Virchow recognized as early as 1847 anatomical differences between the croupous and diphtheritic membrane, and in 1865 declared the two diseases to be totally different. The occasional appearance of whitish or yellowish patches on the fauces or tonsils in inflammatory croup does not always change to diphtheria.

In the Children's Hospital of Dresden, Dr. Kuther reports (in 1845) in 20 years 35 cases of true croup with 20 deaths, 13 recoveries. Contagion was never observed. I myself saw in 1852 two children in the same family suffering from croup, the youngest died, the elder was saved by a tracheotomy. Dr. Palloni reports a fatal case caused by inhalation of hydrochloric acid fumes. An unmistakable case was seen by me in 1871 in a young man of 22 years who had taken a severe cold in riding to extinguish a fire on a cold night in February; it became necessary to perform tracheotomy on the fifth day of his illness, on the eighth day he was able to leave his bed.

Dr. John, of Dresden, has shown that among animals inflammatory croup often follows an exposure to the heat and smoke of large fires.

Inflammatory croup seems to have occurred more rarely in Germany since the epidemics of diphtheria have been on the increase, but I have met with unmistakable cases in 1868, '71, '75, and in the winter of 1891 and '92.

Laryngismus Stridulus can be differentiated from the true croup in that often a mild emetic, sometimes only a warm drink will shortly relieve the symptoms of dyspnœa and in a few days the cure is complete. In true croup, however, there a persistent fever, obstruction of the air passages, and more or less dyspnœa, this latter influenced by the expectoration of membraneous shreds of a yellowish color mingled with the mucus.

The treatment consists in local bloodletting in the cases of well nourished children when the fever is high, and the administration of 5 to 10 centigrammes of calomel hourly. This latter is especially preferable to the use of emetics, and if blood letting is resorted to it should be done early in the disease, later it would not only be useless, but might do much harm.

In mild attacks in weak subjects, one dose of infusion of ipecac, or tartar emetic in small doses, is indicated, but great care should be used in repeating such doses; solutions of copper or zinc should not be used. Pure moist air and ingestion of large quantities of warm water are indicated. External applications consist in the Priessnitz—water dressings around the

*Abstracted and translated for Med. and Sur. Reporter by Marie B. Werner, M. D.

throat or a linen cloth soaked in olive oil. Further treatment consists in 3 centigrammes of calomel every four hours either alone or combined with 1 centigramme of sulf. antimon. aur. (German pharmacopœa) until the exudates become loosened, also an emulsion of amygdalæ with sod. bicarb.

The violent attacks of dyspnœa and continuous desire to cough, I was able to combat successfully with small doses of morphia; if this fails, tracheotomy is indicated.

Diphtheria.—The epidemics and contagion of this disease depend upon the Klebs-Loeffler bacillus. It is, according to Oertel and others, first a local disease, located in the posterior fauces. The time of incubation, from the time of exposure to the appearance of the fever, has been usually 5 days; in this Oertel agrees with me. The usual statement is from 2 to 16 days; some think it may even exceed this number. Close observation has shown that the formation of the membrane on the tonsil and other portions of the post pharyngeal wall is the first indication of the disease. This proof of its being at first a local disease conduces to raise the hopes in many of using local applications to destroy or dissolve the membrane, and in this manner cut short the disease by destroying the bacillus. Many cauterants, astringents, antiseptics, etc., were tried. The first proved to be useless and sometimes harmful, since it was not always possible to confine them to the affected area, but also exposed more surface to the contagion. As soon as the fever has set in it has become constitutional.

Of the countless number of specifics recommended for internal administration, none have been found reliable at all times; it remains therefore for the physician to rely on rational empiricism for satisfactory and sure therapy. It is always necessary in all diseases to understand their regular course and how much nature may aid toward recovery. Dietl, of the Vienna school, has made the pregnant remark: "Nature alone can heal. We must always study first the boundary of Nature's activity. As long as we are ignorant of Nature's laws, so long will we remain ignorant of our duties as physicians."

The course of the disease if favorable toward recovery is usually marked by a high temperature on the first day, 39° to 40° C.; or it may increase to the third or fourth day; or remission setting in on the fifth day at this time the line of demarkation can be observed in the false membrane and in the infiltration of the mucous membrane; the final shedding of the membrane and necrosed tissues takes place between the sixth to the ninth or tenth day and not later than the fourteenth day. The temperature is usually down after the fifth day, but it has been known to rise again on the sixth or seventh day from 39° to 40° C. never remaining high long at time and ending with perspiration. The unfavorable cases, may be characterized from the beginning by the intensity of the attack, the amount of poison taken into the system producing extensive exudations after involving the deeper structures, thus gangrene of the entire tonsils, the uvula and a larger portion of the palate; this is rapidly followed by sepsis and heart failure. I have seen death follow such symptoms in three cases on the fourth and sixth day.

More often there is an irregular and more tedious course of the disease. This is observed in those of a weak, anæmic constitution, with unfavorable external surroundings or improper care during the first days; for instance, through a lack of recognition of the disease, the membranes may be shed too early, thus leaving a surface exposed, and in this way predisposing to an attack on the deeper structures. This is shown by increased enlargement of the lymphatics. The fever is usually high; sepsis often sets in; changes in the blood and muscles, particularly fatty degeneration of the heart muscles, occur; there is albuminuria, and changes take place in the internal organs. Recovery is slow and protracted, the kidneys may be troublesome for some time, anæmia is persistent, paralysis sometimes forms a troublesome complication, often death follows through contraction of the air passage or from heart failure; this latter condition is shown by a sudden decrease in temperature with a rapid pulse. Fever lasting beyond the eighth or ninth day denotes some deep seated complication. Quinine, antipyrin and other antipyretics are not only useless in the first week but may do positive harm.

Since I have become convinced that the disease cannot be kept from becoming constitutional I have been in the habit of

using, sod. nitrate, sod. bicarb. of each 3 to 4 grms. added to 150 to 180 of aqua dest. and 20 grms. of mucilage of acacia or syr. of althea. M. Sig. Dose for adults a tablespoonful; for children a teaspoonful to half a tablespoonful according to age. With high temperature and congestion of the head, give dose of calomel; this was first recommended by Volguarts and it has not only been my experience but also that of others, that it acts as a good febrifuge and aid to the excretions, acting particularly on the kidneys. I hold that it may have also a local action, possibly in loosening the membrane.

In addition, Port or Hungarian wines are found useful after a few days. In the weak, or when the temperature is low, one can begin at once with this form of stimulation. The anæmia receives later etherial tincture of iron or quinine, and citrate of iron dissolved in Spanish wine. Sepsis may be combated with solution of chlorine water or by the mineral acids.

The diet during the first week consists of weak broths, milk and softened toast or roll, large quantities of water and weak tea. Milk given in small and repeated doses, I do not consider good, as it readily upsets the stomach, and that which remains in the back part of the throat forms a good soil for the proliferation of the bacilli.

Of great importance is the local treatment of diphtheria. I have alluded to the impropriety of the use of caustics and the attempts at removing the membrane by chemical means as being easily followed by deeper complications.

In place of ice or inhalations I have used oft repeated luke-warm injections, using a syringe holding fifty grammes of fluid. The patient placed in an upright position, a towel pinned around the neck and a basin in front, the injections are made into both nose and mouth, the water allowed to flow into the basin—three or four syringefuls each time, and repeating every two or three hours. The fluids used are either chlor. potass. ten grms. aq. destil. 160 grms., mel rosae 15 grms., diluting this mixture; or I advise a two per cent. sol. of potass, chlor., the utmost care being exercised in instructing the mother or nurse in regard to its use. I do not advise painting the throat with any of the many solutions in use.

(*To be continued.*)

Society Reports.

THE MEDICO-CHIRURGICAL SOCIETY OF LOUISVILLE.

Stated Meeting, Sept. 2, 1892.

The President, Dr. F. C. Simpson, in the chair.

OPERATION FOR VARICOCELE.

Dr. W. L. Rodman: Mr. President—This patient (presenting case in person) had a well-pronounced varicocele on the left side; was advised by his family physician to have an operation done, and was referred to me. After purging him very thoroughly for several days, I sent him to the Norton Infirmary, then cut down upon the veins and removed a section about one and one-half inches in length; brought the cut ends of the veins together, uniting them by means of a continuous suture of Chinese silk. The case has done very well from the first, none of the symptoms usually following this operation presenting themselves. Operation done two weeks ago.

I am indebted to Dr. Palmer for a valuable suggestion in connection with the case; that is, first purging and then locking the bowels up and keeping them so for at least a week after the operation. His bowels, I think, were allowed to act on the sixth day, at which time the dressings were changed for the first time. You will notice the wound is healed very nicely, leaving only a small scar. There would have been no scar at all, except for the fact that I left a small opening at the upper end and lower end of the incision for the purpose of drainage; I think, however, this was hardly necessary. Another time I shall not provide for drainage, and bring the wound entirely together. I think it is advisable in these cases for the patient to wear a suspensory for at least sixty days after operation, especially in the summer time.

DISCUSSION.

Dr. A. M. Cartledge: There is one feature that strikes me particularly about this case and the excellent results, and that is the suturing of the veins together in order to lift up the testicle. That is the trouble I have found with varicocele operations, the scrotum has become very

much elongated and I have never carried out the varicocele operation taking out a piece of the scrotum, as has been suggested in practice. My results in operations for varicocele have not been as satisfactory as I would like, and I think the method employed by Dr. Rodman of suturing the veins is a very valuable additional step in the operation.

Dr. E. R. Palmer: I want to congratulate Dr. Rodman upon the excellent results following the use of iron dyed silk sutures and their incarceration, without any trouble, in place of the catgut that we have been having such bad experience with. The preparation of the patient for operation in cases of varicocele by first purging followed by confining the bowels for eight days is recommended by Gerster, the idea being that there is danger of fecal infection, and that the suppuration which nearly always follows the operation is due to that cause. Gerster makes a very strong point of this fact, and advises that the bowels be kept closed until the external wound has healed; his suggestion of eight days is, of course, the maximum length of time.

Dr. Wm. Bailey: I would like to ask how the wound becomes infected from the bowels.

Dr. E. R. Palmer: It is a well established clinical fact that it is impossible to prevent the distribution of poisonous material from the feces to the neighboring parts if the bowels are active.

Dr. A. M. Cartledge: I would like to ask Dr. Palmer a question: Some two weeks ago, I saw a most remarkable case of varicocele; patient was a boy about seventeen years of age who thought he had hernia. The testicle on the left side was atrophied to such an extent that you could scarcely feel it, seemed to be about the size of an ordinary bean, with an enormous varicocele on the right side. The question is if an operation is performed on the left testicle how much development will take place in the testicle? Also why varicocele occurs with greater frequency on the left side?

Dr. E. R. Palmer: I think the testicle is practically gone, and you ought to have a double operation to preserve the other testicle. The most extensive case of varicocele that I have ever seen was one which came under my observation a short time since in a rape case. There was an entire disappearance of both testicles in the defendant, simply an enormous bag of veins on each side. The case was, on my testimony, dismissed as one of blackmail.

Varicocele occurs on the left side more frequently than on the right, because of the long vein on that side and the manner of its termination—purely an anatomical reason.

PATHOLOGICAL SPECIMENS.

RICE SEED BODIES.

Dr. A. M. Vance: Mr. President—The first specimen I exhibit is a collection of the largest rice seed bodies that I have ever seen; they were removed from a man, a glass-worker, in Indiana, who, for two years has had developing upon the dorsal surface of his right hand, a large diffuse ganglion. I laid it open from the base of the first phalanx of the middle finger and half way up the forearm, turning out nearly a pint of these bodies, besides quite a quantity of milky material. It was very difficult to scrape them out of the ramifications of the different tendons. The wound healed by primary union, and the man has a very useful hand and arm.

STRANGULATED FEMORAL HERNIA, RESECTION: DEATH.

About the middle of July I was called to see a young lady in the morning, who gave the history that for two years she had been under treatment of a "Rupture Specialist," and had worn one of his trusses; that some months before I saw her, he had advised removal of the truss from a right femoral hernia as she was cured. Eight days before I saw her the hernia had come down and had become incarcerated. He and a professional friend put the patient under chloroform, and, after considerable manipulation, stated that the hernia had been reduced. The patient went home and called the family physician, who treated her one week, feeding her by the rectum. About this time her physician left the city, telling her she would get along all right. The next morning I was sent for, and found the woman about twenty-five years of age, very hysterical, rapid pulse and a large tumor in Scarpa's space; I advised an immediate operation, as I believed it to be an irreduced hernia. However she told me that she had had an action of the

bowels each day that week. She failed to state that she had been fed by the rectum. I operated with the assistance of two trained nurses, Dr. Guest administering the chloroform. I found this portion of the ileum gangrenous and ruptured, and found probably a pint of feces in the sac when I opened it. I determined to endeavor to resect, as the old operation of an artificial anus is a thing of the past. I resected about an inch of gut, doing Wolfler's operation, sewing it together by a continuons Lembert suture, inverting the peritoneal coating, so as to get perfect apposition. The young lady did well for two days; had two evacuations of the bowels, but died at the end of sixty-two hours of septic infection from the foul condition of the wound. I feel sure that the operation of resection was a perfect success, and have been pleased to see that Dr. Ransohoff, of Cincinnati, also advocates primary resection in all cases of gangrene of the intestine from strangulated hernia.

APPENDICITIS: OPERATION.

About eleven days ago I was called to see a gentleman forty-two years of age, with Dr. A. M. Goodman; the history was that he had been quite constipated ten days before. He had succeeded in getting a movement of the bowels, but continued sick with considerable pain, for the first days of his illness, being particularly referable to the region of the appendix. However, when I saw the patient, there was no severe pain or tenderness over that point, and no marked tympanites; but there was some swelling just below the ribs on the right side, and, upon deep pressure, some tenderness. I advised that operation be delayed for forty-eight hours and see what developed. On the morning of the second day thereafter, I was again called; found the man with high temperature, delirious, etc. Dr. Bodine was also called in consultation at this time. We made an incision three inches long on a level with the post-peritoneal space so that drainage could take place there; evacuated a large quantity of thick very offensive pus, and introducing my finger I drew out two little casts of fecal matter about as large as a lead pencil and two inches long. I then irrigated the cavity and in addition to the fecal matter which came away with the irrigation water, we found this membraneous looking affair that you see here, which upon examination, proved to be the appendix vermiformis. The case has progressed very favorably since that time; the delirium left him in a few hours, and be has been perfectly rational and free from fever. The wound, now, after eleven days, has healed and the cavity is closed up. Evidently when Dr. Goodman first saw the patient, there was a circumscribed abscess around the appendix, which later ruptured into the post-peritoneal space, while the patient was lying on his back, proving positively that the appendix sloughed off into the post-peritoneal space, a question which has been in doubt. I failed to state that since the operation, and before closure of the wound, a considerable quantity of material looking like coffee grounds has come away; also a piece of egg shell about half the size of your finger nail.

RESECTION OF COCCYX.

The next specimen is a coccyx removed from a young lady seventeen years of age, who gave the history that six years ago when she was eleven years of age, she had a chair pulled from under her, allowing her to fall upon the floor causing considerable pain. In the last two years only, has she been seriously inconvenienced by pain and tenderness in the sacral and spinal regions. She had been treated by several physicians and a spinal brace had been recommended by a so-called "Surgeon" in town. Upon examination it was found that the coccyx presented at right angles toward the rectum, and was perfectly movable. It was removed quickly through a very small incision. I did it by first cutting through its junction with the sacrum, dissecting down around it without making the large opening that is ordinarily done.

BOWEL OBSTRUCTION: OPERATION.

Here is a little specimen which does not amount to much as far as appearance goes, but seems to have played a very important part in the case in question. The patient was a young lady twenty-five years of age, with history that on Friday afternoon she had an eating match with her sister to see which could get away with the greatest amount of grapes, afterward eating a musk melon apiece. Friday evening she was

taken with great pain in the abdomen referable particularly to the region of the umbilicus. She began vomiting about the same time, which continued until I was called to see her. On Saturday about twelve o'clock it became fecal and continued so all day Sunday and Monday. When I saw her Tuesday she was still vomiting fecal matter, the family in the meantime had been giving her considerable milk, which was mixed with the material evacuated from the stomach, in a curdled state. Upon examination I found the abdomen moderately tympanitic, but no cake, however, very tender and painful on pressure; temperature 100⅗° F., pulse 120. I recommended an immediate laparotomy, which was consented to, and with the aid of Dr. Forwood and two laymen as assistants I did the operation. When I reached the interior of the abdominal cavity, I could discover no particular morbid condition; I then began to read the distended ileum. I had probably read about two-thirds its length, when in trying to raise it further, something gave away. I found on this portion a marked constriction as if a half inch rope had been tied there for a long time. Just to the side of it was this little body, which seems to me to be a mesenteric gland: however I tied it off. It was evidently an attachment of some kind, possibly the appendix. The intestines immediately filled up below, and I milked the fluid from the distended portion of the ileum and closed up the external wound. The patient continued to vomit fecal matter for twenty-four hours after the operation, but in smaller quantities and with less frequency than before. Salines were administered by the mouth, which caused free movements of the bowels. I heard from the patient to-day, she is still alive and prospects seem to favor complete recovery.

CARCINOMA OF LEFT APPENDAGES AND UTERUS: OPERATION.

This specimen was removed from h maiden lady thirty-five years of age. Sae gives the history of having had painful mentsruation, pain particularly severe in the region of the left ovary, for twelve years. Eight or nine weeks before she called upon me, she had been attacked with nausea and vomiting which lasted three days. She states at this time the enlargement of the abdomen commenced. When I saw her the abdomen presented the appearance and size of about a six months' pregnancy, a curious feature of it was that the enlargement appeared to be general. If it was a tumor, the tumor was controlled by the abdominal contents, rather than the contents being controlled by the tumor, as is usually the case. It was impossible to make a diagnosis of cyst, that is, a differential diagnosis between cyst and abdominal accumulation. Dr. Bailey saw the case, also Dr. Hays. She was also put upon purgatives, rochelle salts being given in one-half ounce doses each morning for two weeks. After I saw her I put her to bed and she had partial suppression and retention of the urine, which required catheterization for two or three days. The only medication for two weeks was rochelle salts, digitalis and acetate of potassium. Two weeks ago last Tuesday at the Norton Infirmary I did an abdominal section, exploratory; found a tumor presenting, a very peculiar feature being that it was not entirely filled with fluid. It extended out into the loins, around everywhere, among the intestines and abdominal organs, without having any definite shape. It was punctured and about a gallon of fluid removed. The tumor was easily delivered, and found to be attached to the left horn of the uterus by a very small pedicle. The tumor evidently contained the left ovary and tube; a mass of very friable material was found at the point of attachment to the uterus. Fearing further trouble from the friable condition of the pedicle, I passed the ligature around a portion of the left horn of the uterus to be sure that it would lie in good tissue. The patient made an excellent recovery being able to leave the Infirmary on the tenth day after operation. Dr. Frank has made microscopical section of a portion of this tumor, the specimen being at present on the slide of the microscope for your inspection, and he pronounces the trouble carcinoma; also states that the carcinoma is mixed with uterine tissue, showing that the uterus is in a carcinomatous condition. The question now presents itself as to whether it would not be good surgery to extirpate the uterus per vaginam or otherwise. The fluid contained in the cyst was the ordinary coffee colored ovarian fluid, or such as we usually see in ovarian cysts. I will

further state that the uterus appeared to be perfectly normal in shape, size and condition, as was also the other ovary.

DISCUSSION.

Dr. John Howard: I have carefully examined the specimen on slide of the microscope, and think there is no doubt but it is carcinomatous in character; uterine structure is also plainly discernible.

Dr. A. M. Cartledge: I think the case of appendicitis reported by Dr. Vance is doubly instructive; it in a practical way proves what certain men who have paid a great deal of attention to this subject in the last two or three years have been claiming; that is, that all of the trouble in the region of the cæcum belongs to the appendix primarily, that the appendix is the offending organ. Here is a case that according to its clinical aspect would be called perityphlitis, and yet the history proves that the appendix sloughed off into the post-peritoneal space; showing that while the appendix is an intra-peritoneal structure, yet, under certain circumstances, it might find its way back into the cellular structure. I think it is an exceedingly interesting case, and take it that it will be a long time before we will see another case that proves as much as this one.

In regard to the last case reported by Dr. Vance—it is certainly a very unusual case. Her age is against cancer, and all the history makes it puzzling. If the microscopists prove that the trouble is of a cancerous nature, I think the indications demand an immediate hysterectomy. I should prefer the vaginal hysterectomy, and think the operation might prolong the life of the patient for quite a length of time. From the examination I made of the specimen, I think there is no doubt about its being a malignant disease.

Dr. A. M. Vance: As Dr. Bailey saw this case, I would like to ask his judgment as to the propriety of an operation, removing the uterus.

Dr. Wm. Bailey: The case seems to me to be in such good fix, that while it might be good surgery to extirpate the uterus, still I would be disposed to wait until there was some further manifestation.

Dr. F. C. Wilson: I think it very probable that the case of appendicitis reported by Dr. Vance was caused by grape seed. I reported to this society several years ago the case of a little girl who had appendicitis, later dying from general peritonitis, caused by swallowing blackberry seeds. In the same family there occurred about ten days ago another similar case, the result of swallowing grape seed. The patient had been ill several days before I saw him; I recognized the features of it, and told the family my suspicions. I asked Dr. Dugan to see the case and agreed with him in advising an immediate operation. This was done, and the appendix was found to be perforated, and a collection of matter was found in the neighborhood. This was evacuated and the wound properly dressed. The patient, however, died in about thirty-six hours after the operation.

The question arises in my mind whether the result in the case reported by Dr. Vance would not show that there is possibly less danger in allowing these cases to take their own course, the appendix often sloughing off making its way backward through the posterior opening, rather than opening in front through the peritoneum, as was done in the case I have mentioned. In this case the peritoneal cavity was opened, for the reason that the abscess could not be reached by any other means, and, I think, possibly the manipulation and exposure contributed something toward infecting the general peritoneum. It is a question whether nature's course would not be the safest of the two. That is, it might often be better to wait and let the matter gravitate backward into the post-cæcal space.

Dr. J. G. Cecil: In reference to the last case reported by Dr. Vance all authorities, I believe, are agreed that the operations for removal of cancerous womb depend upon the extent of the involvement. If the cancer has extended to the womb, I think there is very little hope in any operation, except complete removal, no matter how it is done. It seems to me the determination as to what should be done in this case, would depend upon two things; first, what the exact relation of this growth was to the womb, whether it were part of it or not; if it is a part of it, then evidently the womb is cancerous, and, of course, if the involvement does not extend to any of the attachments or any of the surrounding organs, then hysterectomy I think would be the thing to be done. If, however, after this has been done any of the structures which are adjacent to the

womb have been infected by contiguity, then the operation would be of no avail. In other words, if the cancerous growth extends to structures outside of the womb, and its attachments, then the operation would promise no relief, and I think the woman would in all probability live longer without operation than she would with it. It, of course, is a very difficult question to decide exactly where the limit of this growth is. If it is confined to the womb, then remove the womb; if it is outside of it (and apparently it was outside of it), then it seems to me that the indications are not so favorable for operation.

Dr. A. M. Vance: This body which you see here was separated by a small pedicle from the uterus; this body however was very friable and the uterus was lifted up when the ligature was applied, and about three-fourths of an inch or more of uterine tissue was tied off. In other words, the section made to remove this growth was through uterine tissue. Dr. Frank asked me at once when he was preparing the microscopical section if I did not remove the uterus, as there were evidences of uterine tissue mixed with the carcinomatous cells. So, I do not think there is any doubt but there are cancerous cells in the uterus proper.

Dr. Wm. Bailey: In this connection, I would like to say that it was thought at the time of operation, that the uterus was about the healthiest thing we had about that neighborhood. If the disease is malignant, it has already invaded tissues beyond the uterus, and the removal of the uterus will not save the patient.

Dr. Turner Anderson; Concerning the last case reported by Dr. Vance. It seems to me it would be advisable to wait a little while before suggesting operation. It is true there is some risk in waiting, If the trouble recurs involving organs other than the uterus, then, of course, a vaginal hysterectomy would be out of the question, and the chances of giving the woman the benefit of operation would be taken away from her. The fact that the portion of uterine tissue examined contains evidences of carcinoma, is altogether in favor of vaginal hysterectomy. It is absolutely necessary that the uterus should be perfectly movable in order that vaginal hysterectomy may be performed. The liability to recurrence is very great. In one case which I saw quite recently, the bladder was wounded in the operation, a vesico-vaginal fistula was left, and in less than three months this fistula became carcinomatous. The woman is still living but has a very large and painful nodule in the bladder.

Dr. C. Skinner: In regard to the future of the last case spoken of by Dr. Vance. Unhesitatingly I think immediate operation is the thing to do. I would not delay the matter, just as soon as the patient's consent could be obtained, I would go ahead and remove the uterus, and the ovary and tube on the other side. I cannot agree with any one that it would be wise to await further developments; it may be too late for operation to promise relief. I think the woman will live longer and the chances of ultimate recovery will be greater by removing the uterus at once. As to the mode of procedure, I should prefer the vaginal hysterectomy.

Dr. H. M. Goodman: Referring to the case of appendicitis reported by Dr. Vance: I would like to hear one or two points discussed that I do not think have been brought out. One point raised by Dr. Wilson is the question of waiting; when I was called to see the case in question about the eleventh of August, I found the man complaining of constipation, pain over the appendix, temperature 103° and considerable tympany. I pronounced it by the old term perityphlitis. The case progressed very well for the first four or five days, then I considered that it was becoming surgical and advised the calling of a surgeon, and Dr. Vance was asked to see the patient about the seventh day. Two days before he saw the case, the pain in the region of the appendix had suddenly ceased. He was a little in doubt as to whether it was a case of appendicitis or not and so expressed himself; that it might be simple abscess, and advised waiting for forty-eight hours. Another point raised by Dr. Anderson as to whether the appendix is intra or extra-peritoneal: I remember in my dissections at the University, I opened somewhere about one hundred and fifty abdomens, and think I can safely say that in no more than fifty per cent. the appendix I noticed had a mesentery of its own; while in other cases the appendix was behind the peritoneum. In all cases where there is a mesentery, perforation is most likely to open into the peritoneal cavity. With further reference to the case under

discussion: I do not know why I insisted upon this man remaining in the dorsal position, but I did from the very start; whether this favored the gravitation of pus into the subperitoneal space or not, I do not know. But the question I would like to hear discussed more particularly is, whether as a general rule in cases of appendicitis, it is best to operate in the first three days, and what have been the results of such treatment. Surgery, of course, in these cases, offers the only hope of relief, and I think the case in question was simply a fortunate circumstance which we did not know had taken place.

Now, there are two forms of appendicitis; one which is a non-perforative variety, without suppuration and tends to get well by resolution, and is generally recurrent. The other form perforative appendicitis, with suppuration and often abscess or diffuse peritonitis. I had a case of this kind about seven years ago, a beautiful young lady who had recurrent attacks of typhlitis, some fifteen or eighteen in number, and she died. In all cases of recurrent typhlitis I think the operation for removal of the appendix indicated during the intermission. In cases of suppurative typhlitis I think the time for the operation can only be determined by the individual indications of the case.

Dr. F. C. Wilson: Now this raises another question in regard to the cases that happen to recover after an attack of appendicitis, possibly without suppuration, but recurring from time to time: I remember seeing about a year ago a little boy that I felt satisfied had inflammation of the appendix, and expressed my fears to the family, but resolution seemed to take place possibly without suppuration, and I heard no more of the case until I saw an account of the little boy's death, probably from recurrence of the same trouble. I have seen one other case within the last year that evidently was appendicitis, which recovered by resolution, but left considerable tenderness—Now is that boy to look forward to a recurrence of these attacks with a possibly fatal termination at some time, or, is it proper even after the case gets well, to perform an operation removing the appendix? Would that not be a justifiable operation, thus relieving the case of all future danger? Whenever this inflammation occurs once, is not the patient more liable to it afterward, so much so that the removal of the appendix would be justifiable?

Dr. H. A. Cottell: From the examination I made of the specimen under the microscope (section of tumor, Dr. Vance's case) I should not hesitate a moment in pronouncing it malignant growth, but, when it comes to the question as to whether it is really a carcinoma, I would not like to give a positive opinion without a further and more careful examination.

Dr. A. M. Vance: I would like to answer Dr. Goodman: In the East it is recommended that whenever McBurney's point is well marked, and the temperature exists forty-eight hours over 102° F, the case should be operated upon.

EXTIRPATION OF INGUINAL GLANDS.

Dr. W. L. Rodman: This specimen was taken from patient referred to me by one of the gentlemen present. He had several enlarged inguinal glands following the course of acute gonorrhœa. The doctor thought that he would be better off by having these glands dissected out, rather than to wait for them to break down spontaneously. I made an incision, and, in removing the glands, I found that this one had already undergone suppuration. I consider that I was very fortunate in being able to get it out without infecting the wound. I closed the wound with a continued buried suture of Chinese silk. The wound healed by first intention and the case was discharged on the third or fourth day after the operation. I think the patient was saved at least a month's suffering by dissecting out these glands. I have been doing this operation now for two or three years, and every time I do, I feel better satisfied with the result.

DISCUSSION.

Dr. A. M. Cartledge: My experience confirms the statement made by Dr. Rodman, that we do not remove enough of these enlarged glands, not only on the ground of saving a long convalescence, painting with iodine, etc., but they usually go on to suppuration, which can be prevented by early removal. The same thing is true of enlarged glands of the neck, whether they be tubercular, chancroidal, or otherwise.

Dr. A. M. Vance: My experience with enlarged glands, especially those about the neck has been quite different. I believe

when we cut down and attempt to remove the large number of glands in the neck, we do not get them all out. Manipulation seems to cultivate these glands. I had a patient not long ago with enlarged glands of the neck, and at the first operation I removed about twenty; in a short time they had reappeared, and I again operated, removing perhaps thirty more. The patient seems to be entirely well now. I have often worked on these cases for an hour, or even an hour and a half. I remember one in particular where I dissected enlarged glands for about an hour; after two or three months they reappeared seemingly as numerous as before.

Dr. A. M. Cartledge: I believe that we all profit more by our mistakes than by our successes. In connection with the removal of these glands about the neck; my early experience in the removal of these glands was similar to that related by Dr. Vance. I think if the Doctor in dissecting out these enlarged glands, would be sure to remove all the gland capsule, he would not have recurrence.

Dr. E. R. Palmer: I would hesitate very much about dissecting out chancroidal glands, because of the almost certainty of infection of the wound. I have had very little trouble from enlarged glands in gonorrhœa; I have dissected them out in a few instances, they were however adjacent to glands that had already suppurated and been opened. I, of course, would not molest the inguinal glands in syphilitic adenitis.

Dr. Wm. Cheatham: I have had in the last few months three cases of enlargement of the inferior maxillary glands, which I have treated in rather a unique way by the bougie; all three were cases of obstruction of the duct with retention of the secretion.

In some cases it is with much difficulty that the opening to Wharton's duct can be found; in one case by staining with a solution of fluoresine I was able to locate the opening. In another case the opening had to be slit with Bowman's knife, then a small Bowman's probe was passed and gradually increased in size until the duct was dilated; after this an eustachian bougie was used and passed to the gland, the secretion gradually emptied by gently milking and pressure. In those cases where there is much inflammation of the gland, hot applications should be made externally. With several days' treatment by this method the glands are easily reduced. One case recently treated in this way had been advised to have an incision made externally.

I am in favor of this operation for inlargement of these glands in preference to any external incision, as no scar is left.

Translations.*

M. B. WERNER, M. D.

To determine certainty of death in a cholera patient, Dr. A. Netter (*Rev. med del Est*:) Neither the arrest of respiratory movements or cardiac action are signs of death in a cholera patient. Claude Bernard has compared the asphyxiated stage of the patient to the winter sleep of the ground hog. The exhaled air contains no more carbonic acid gas than that which is inhaled; the arrest of the circulation is for that reason not a sign of death. The successful restoration of a patient in extremis, by intra-venous injections, necessarily establishes doubt. Netter proposes therefore in order to be certain of the death of the patient the following: 1. Through a stomach tube introduce a large quantity of fluid into the alimentary tract, the epithelial coverings having become so thin that there is a possibility of the water being absorbed. 2. Place the body in a warm bath. In the year 1846 a child of 6 or 7 years who was supposed to be dead was placed in a bath of 14° C. It raised itself up and spoke at the time; unfortunately it was taken out after a half hour and it was scarcely in bed when it died. The simplest method, however, would be to make a small incision through the abdominal wall in the presumably dead cholera patient and inject a large quantity of warm water into the abdominal cavity. This operation is a simple one and in case of restoration the results can be nothing but satisfactory since it has lately become customary to introduce large quantities of warm water into the peritoneal cavity during operation.

Some notes upon cholera in the pregnant are made by the principal physician in the State Hospital, Saratoff, Dr. Tipja-

*Translated for the Medical and Surgical Reporter.

koff, in *Centralb. f. gynak.* Of 243 women admitted there were seven pregnant; of these seven, four between three and four months, two in seven months and one in nine months. Tipjakoff was not satisfied that the fœtus died from the cholera poison but that the increasing prostration of the mother in the arrest of the interchanges of gases and the hæmorrhages between the uterus and placenta are sufficient themselves to destroy the life of the child.

Notes from the International Physiological Congress held at Luttich, 29, 30, and 31 of August, 1892: Wertheimer, of Nancy, made some experiments, according to Schiff, by injecting bile into the blood. The separation of these fluids increased the field of his studies. The question arose whether the injected products enter the liver or if they produce a more active secretion of the liver cells. Wertheimer used the bile of the sheep which has a spectrum of four characteristic stripes, while the bile of the dog as gathered from a biliary fistula shows no spectrum. When an injection is made into the vein of a dog of several c. c. of sheep's gall, one can find after fifteen minutes, the spectrum of the four characteristic stripes of sheep's gall in the fluid passing from the biliary fistula in the dog. When the injection is made into the mesenteric vein the immediate passage of the bile into the liver is proved.

The cerebro-visual centers in the dog and ape: Vitzou ablated the posterior portion of the left hemisphere corresponding to the lobus occipitalis of other mammalia until he reached the neighborhood of the cerebellum. He placed a bandage around the left eye of the dog, and observed that the animal could see but little through the uncovered eye; if he held a piece of meat near the three inner quarters of the uncovered eye the dog was unable to see the meat; as soon, however, as he placed it at the outer portion of the visual center the dog saw it. If the right eye is covered and you bring the meat near the outer quarters of the uncovered left eye the dog remains indifferent, if it however is brought near the inner quarters of the same eye the dog sees it at once. There is then homogeneous hemianopsie and an incomplete crossing of the nerve filaments in the chiasma. If the same operation is repeated on the remaining occipital lobe the animal becomes totally blind. The conclusions from this are that the removal of the occipital lobes results in a loss of visual perception. This opposes the results of the experiments of Goltz who claimed that a dog deprived of his brain lived eighteen months giving no signs of blindness. Ferrier and Yeo have placed the center of visual perception in the gyrus angularis. Vitzou has removed the gyrus angularis on both sides and was unable to produce blindness.

Total ablation of an entire hemisphere of the brain of the dog: Vitzou removed in April the entire left hemisphere of a dog three and a half months old. It was noticed on the following day that when the dog stood upright the limbs of the right side were relaxed and wanting in tone. In walking it was observed that the animal touched the floor with the outer portion of the right extremities and had a tendency to turn itself from right to left. About ten days after complete recovery, the dog was lively, but it was noticed the right extremities could be used less than the left.

Subcutaneous transplantation of the pancreas: Hidon, from Montpelier, was unable to successfully transplant the pancreas of the dog beneath the abdominal integument; it continued to act as seen by a small fistula through which the pancreatic juice exuded. This juice digested albumen, emulsified fats and contained sugar. In connection with the theory of diabetes of pancreatic origin he has made the following deductions. First, if the pancreas has been transplanted in a dog in which the intra-abdominal portions have been carefully extirpated there will be no glycosuria no matter how long the dog is under observation. Second, if the transplanted pancreas is extirpated glycosuria will at once appear. Third, if the transplanted pancreas begins to atrophy glycosuria will appear at once and increase in proportion to the progression of the atrophy.

Courmont and Dyon, of Lyons, interested themselves with the question—does Tetanus poison act upon the muscle or

nerve? They injected some of the poison into a frog. After the muscles became rigid they injected curare, after which the muscles relaxed. This led them to conclude it was no muscle poison. The authors in addition, to prove their theory, severed the main nerve supply of one hind leg of a frog and there injected the Tetanus poison. The enervated foot remained relaxed. The animal lived several weeks. This experiment again showed that Tetanus poison was not a muscle poison.—*Deutsche Med. Zeitung, 1892.*

Dr. L. E. Keegan (*Provincial Medical Journal*) speaks of the satisfactory action of boric acid in Typhus. He has used the remedy in fifty-two cases in doses of 0.6 to 1.2 grammes every four hours. Meteorism and diarrhœa at once become reduced and disappear, the tongue becomes moist and the general condition improves. In two cases Keegan believes to have shortened the attack by this medication. In the *Mèdicine Moderne* this method of treatment has also been recommended and 3.6 grammes of boric acid have been dissolved in a half litre of water and taken in divided doses in twenty-four hours. Dujardin-Beaumetz recommends a mixture of boric acid with other antiseptics. Borac acid, salol, beta naphthol, salic. of bismuth, each 0.25; M. ft. pulv. no. 12. S. One powder four times daily. The condition of the kidneys must be carefully watched and the urine examined daily for albumen.

Gibert has collected the statistics of 1000 infants who had been raised on the bottle and 500 which have been nursed at the breast. Of the 500 only two suffered from the disorder of dentition. Of the 1000, fifty-eight suffered from stomatitis, twenty-eight of Fraisen and he concludes from this that teething in children is aided through the normal physiological use of the gums at the mother's breast.—*Medicin Neuigk.*

Foucaut and Béranger-Féraud recommend the following drink for gout: Acid lact., aqua dest. ana 40.0; of this solution a teaspoonful each morning to three or four glasses of water sweetened if desirable and drunk during the day. At the end of twenty days an intermission is advised of ten or eleven days, to begin in same manner at end of that time. This is continued through many years. The above named authors believe they have seen a diminution in frequency and severity of the gouty attacks, and think there may be a possibility of their entire disappearance. The long continued use of lactic acid produces no deleterious effects on the digestive apparatus—*Medicin Neuigk.*

Tolerance of the abdominal cavity and uterus in pregnant women: In contradistinction to the small provocation for abortion in women in the higher grades of life, it is interesting to note the grave accidents to pregnant women living in the country notably through cow horns, which heal sometimes without interrupting the pregnancy. In 14 cases in which the uterus was torn, only 4 women died and this in the face of the fact that the tear was not sewed in any of them. Two children of the 4 dead mothers lived and 4 times mother and child lived. Even gun-shot wounds into the uterus, the ball remaining in the fœtus, have resulted in recovery after the fœtus was born; three cases of which were mentioned. A pregnant girl plunged a hat pin through the umbilicus into the abdominal cavity, aborted without further trouble than a short suppurating sinus near the navel.

Another case of recovery in a mentally diseased woman who had made a 4¾ incision in the median line through the abdomen and extracted the fœtus and killed it.—*Medicin Neuigk.*

ANTIPYRINE IN EPISTAXIS.

Dr. E. G. West, Boston, Mass., says that he has yet to find an agent so reliable in epistaxis or nose-bleed as antipyrine. It is his custom when a case of unusual violence occurs to saturate a pledget of cotton in a solution of antipyrine or in the dry powder and introduce it into the nostril. It stopped the bleeding in every instance that he applied it. The patient by this method is relieved of the disagreeable tarry clots formed by the solutions of iron so commonly used for this purpose, He finds antipyrine is an antiseptic that can be relied on, but he has learned to use it in smaller doses than formerly, and by so doing he can acquire the same results.—*Ex.*

Abstracts.

DIPHTHERIA.*

By A. BOWEN, M. D.,
NEBRASKA CITY, NEB.

Eleven years since, at the request of this Society, I addressed you upon this subject; and if to-day, at the request of your "Chairman of Committee on Practice of Medicine," I come before you and say that I have no new suggestion to make on treatment, you may think that I lack the spirit of progressiveness and that the light which science sheds over all things had not visited my eyes. The revelations of nature are old, and the powers of drugs remain the same to us that they did to our fathers. The same treatment with which I used to abort tonsilitis forty years since in the Catskill mountains, is all-sufficient, and ever has been, in extinguishing diphtheria, if the patients are seen early and treated from the first with *over-bearing and persistent earnestness.* Nothing less than this will answer and this always will.

I am not blind to the fact that different epidemics of diphtheria, like different epidemics of small-pox and scarlatina, possess different degrees of malignity, and will claim their victims; but I do know that all of you who are *terribly in earnest* can limit the mortality to less than five per cent. I do know—*I do not conjecture*—that German children are more obnoxious to the disease than American children; probably this is due to their different mode of living. Three years since, I was called to two families of Germans, eighteen miles from my residence. Seven members who were children in one family and four in the other. They had contracted the disease from the contagion of a corpse at a funeral. One in each family had had the disease for several days before I was called. I said to the parents that these two would die. Knowing that my word was law in those two houses, I unhesitatingly commenced the same course of treatment through the day among the sick and the well; among them was one baby who nursed a bottle. Their throats were earnestly swabbed every two hours during the day; and the sick during both day and the night. As fast as they came down with the disease I swabbed during the night as well as during the day. Every child had the disease and every child (except the one referred to above) in each family recovered. These two are the last children I have lost of diphtheria.

When epidemic commenced last November the Chairman of the Board of Education wrote to all the medical men in town requesting their opinion of the necessity of closing the public schools; all but one dissuaded them from closing. It was the mildest and the widest spread epidemic of diphtheria I ever saw. Still, there is enough diphtheria in every case, to kill, if neglected. I always grow poor in flesh when treating diphtheria. A a gargle for children who are exposed to contagion or infection, a four per cent. solution of carbolic acid, thoroughly mixed with cold strained tea, either gargled, or better yet, mopped deep in the throat every four hours; or if the disease has invaded the nostrils, or nares, or if it is threatening them, the same wash sent through a two or three drachm glass syringe with a somewhat forcible jet; a small cork being fitted to the nostril of the child with an aperture through the cork to fit the nozzle of the syringe and the child always held perpendicular. If the disease has invaded the throat, (as it usually has), then more earnest means must be used there; of twelve parts by measure,

One part is to be carbolic acid.
Three parts are to be sulphurous acid.
Four parts are to be glycerine.
Four parts are to be mur. tincture of iron.

The throat to be swabbed or mopped deep with this solution every two, three or four hours. They must eat and they must sleep, and here comes in the tact and discretion of a good nurse, and all you possess of these qualities you will find available. Intubation is a more respectable apology than laryngotomy, but the latter is merely a bloody excuse for early neglect. *Arrest* the disease at the earliest moment and save from its terrible alternatives—asphyxia or septicæmia. If your patient resists you, swathe him or her tightly from the chin to the toes, and get the mouth open by the help of a soft pine wedge; they will not resist you if their throats have been properly educated.

As to the cause of diphtheria we do not

*Read before the Nebraska State Medical

possess much more accurate information than we do of the cause of small pox, or scarlatina, or the epizootic. We hear that the latter disease has struck our Eastern coast and we know that in about so many days it will show itself in our stables, though the wind may blow a gale from the west all the intervening time. Diphtheria is surely "a pestilence that walketh in darkness." Belknap says in his history of New Hampshire that a visitation of what was probably (from the description) diphtheria first visited our country in 1735. Of the first forty who were attacked, none recovered.

In the parish of Hampton Falls, twenty-seven persons died in five families and one-sixth of the population died in thirteen months, and twenty families buried all their children. We may have reason to fear (for we have seen a similar error committed in our day) that some physicians may have depleted for the wretched fever which accompanies the disease, forgetting that it is adynamic in its character. Belknap says of the Boston visitation at this period, "The physicians having by desire of the selectmen held a consultation, published their opinion that it proceeded entirely from some *occult quality in the air*." Can their successors of the fourth generation give a more definite answer with assurance? And at what earlier day did an American town institute *scientific inquiries* as the basis of sanitary measures? I cannot look upon diphtheria, even in our present ignorance of its prime cause as one of the opprobria medicorum, but as a disease to be met earnestly and in a hopeful mood.

ON CERTAIN DIURETIC DRUGS.

Speaking of dropsy, Dr. Haig (*Lancet*, July 9th) says: All drugs that hinder the solubility of uric acid and clear it out of the blood relax the arterioles and cause diuresis, and indeed not a few drugs whose diuretic action is well known owe their property entirely to their action on uric acid and so indirectly on the arterioles. Thus opium, mercury, iodide of potassium and other iodides, salicylate of soda, caffeine and lithia salts, all produce more or less diuresis and diaphoresis, and all have this also in common—that they clear the blood of uric acid. Opium is often used, either alone or in combination, for its diuretic or diaphoretic properties. I have shown that it raises the acidity, diminishes the excretion of uric acid, and clears the blood of it. A good deal has been written about the diuresis produced by mercury and I have shown that it forms an insoluble compound with uric acid, clears it out of the blood and relaxes the arterioles. Iodides also are fairly well known as diuretics, and my researches show that at the time they cause diuresis they diminish the excretion of uric acid and clear it out of the blood, thus allowing the arterioles to relax. Further, the uric acid thus held back passes through the blood when the drug is let off, causing contracted arterioles, headache and scanty urine; in fact, a rebound, just such as is met with after opium, mercury, iron, lead, lithia, or any other members of this group. A good deal also has been written about the diuresis produced by salicylate of soda, but its effects in this direction are entirely dependent on the fact that it clears the blood of uric acid. Unlike the drugs I have already mentioned, it clears the blood of uric acid, not by rendering it insoluble and retaining it, but by rendering it soluble and producing its elimination by the kidney, and a knowledge of this fact gives us the explanation of an important point in which the diuresis produced by a salicylate differs from that produced by the before-mentioned drugs. Take a dose of opium, mercury or an iodide, the diuresis they produce comes quickly, within a few hours of swallowing the dose—*i. e.*, they quickly clear the blood of uric acid and relax the arterioles; but with a dose of salicylate this is not so. Take fifteen grains of salicylate of soda three or four times in one day, the urine will not be at all profuse; on the contrary, it will be rather scanty. Continue the same dose next day and towards the end of the second twenty-four hours there may be a marked diuresis.

Now, the explanation of this is simple. On the first day of its action the salicylate meets with a large amount of uric acid and passes a great deal of it through the blood and out by the kidney. The arterioles are consequently contracted and there is no diuresis. On the second day, however, the immediately available supplies of urate run short and excretion falls down almost to the level of formation. There is but little urate in the blood, the arterioles can relax and diuresis results. If a

patient has a large amount of urate in store the diuresis with salicylates may not occur till the third day, but in my own case it comes almost invariably about the end of the first thirty-six hours. It is evident, then, that the diuresis produced by a salicylate is not due to its direct action on the arterioles, but to its direct action on the amount of urate contained in the blood, and varies in accordance with the amount of this substance that it meets with. Precisely the same thing holds with the alkalies, soda and potash. Caffeine is well known to cause diuresis. I have pointed out that it diminishes the excretion of urates and relaxes the arterioles, and is well known to be useful in conditions of migraine and depression, no doubt from its action on the urates in the blood. Salts of lithia, again, produce a marked diuresis and this diuresis comes quickly, resembling that produced by opium, mercury and the iodides and differing from that produced by salicylates. But lithia salts act as alkalies, increasing the alkalinity of the blood and diminishing the acidity of the urine, and we have just seen that the alkalies (soda and potash) increase the secretion of urates and diminish the urinary water. Here again, as in the case of salicylates, we have the most absolute proof that the scanty urine or diuresis produced by drugs is due not to their action on the vessels, but solely to their influence on the solubility and excretion of urates, which have a powerful influence on the vessels. What is the action of lithia salts on the excretion of uric acid? They greatly diminish the excretion of uric acid, clearing it out of the blood and relaxing the arterioles; hence they produce diuresis. Soda and potash increase the uric acid and diminish the water.

EXCORIATIONS IN INFANTS.

Dr. Floyd M. Crandall, in an interesting article on the management of the newborn infant, states that he has obtained better results from an oily preparation than from powders, where excoriations are severe. He recommends the following, proposed by Fox:

℞

Acid Salicylici	gr. x.
Bismuthi subnit.	ʒ ii.
Amyli	ʒ iss.
Ung. aq. rosa ad.	ʒ i.

—*N. Y. Med. Jour.*

THE CARE OF THE NASAL PASSAGES DURING CHILDHOOD.

Dr. W. F. Strangways, in an article in *Physician and Surgeon*, calls attention to the care and treatment of diseases of the nasal passages, during early childhood. While great results are being achieved by preventative medicines, there are some fields sadly neglected, one of which is nasal affections and acute colds.

Between the months of November and May, every general practitioner sees many children suffering from cold in the head, little or no attention is paid to it. He regards it as a law, that every cold has a tendency to leave some chronic inflammation, which if kept up, will develop some form of rhinitis.

A large part of the catarrhal troubles of adult life, are directly traceable to the carelessness of both parents and physician, who allow colds in the head to pass by untreated in early life of the patient.

The first step, toward curing catarrhal troubles, in the nasal passages is to gain good vigorous health. Constitutional treatment is of great importance, cold baths, short exposure to cold air, frequent frictions and wearing woolen clothing are measures of first importance. Special attention should also be given to the child's feet. The medicinal treatment should require care and thought. Every physician has his own method of managing a cold: during the first stages, the general rule seems to be, to let it alone. So doing, they allow chronic rhinitis to develop. He recommends warm alkaline solutions, and medicines to restore heat and sweating, during the first stages Bicarbonate of soda and biborate of soda, thirty grains of each, in one pint of hot water, likewise solution of boric acid, are good during first stages. The main thing is to keep the nasal passages clear and prevent the discharge from being retained. For infants, the best way to use a detergent is to pour it into the nostrils, with a teaspoon; the medicament should be warm, mild, and only a few drops used at a time. An atomizer may be used with older children. Parents should be taught to look for, and remove any hard crusts which may form, and if the child is subject to repeated colds, it should have a careful rhinoscopic examination followed by proper treatment.

REPORT OF CASE OF IMPACTED CERUMEN AND ITS RESULTS.

Mr. B., aged 22; Seigel St., Brooklyn, came to my clinic at the Central Throat Hospital and Polyclinic Dispensary of Brooklyn for the treatment of a slight conjunctivitis.

I noticed that the patient was extremely emaciated and pale, seemed very weak and had frequent spells of coughing. Upon inquiry I ascertained that the patient had been under the treatment of various physicians and that almost all had given a diagnosis of "Incipient Tuberculosis." I learned that the patient had daily rise of temperature, night sweats and frequent spells of coughing followed by some expectoration. He had had one slight hæmorrhage and complained of pain in the lower part of thorax.

The patient having noticed me treating several ear cases, remarked that one of his ears troubled him and that he would like to have it examined. I found his hearing for the watch in right ear normal but in left ear only by contact. The tuning fork was heard best in front of right ear, but in the left it was heard only on application to the mastoid. When placed on the teeth or frontal bone the sound was positively referred to the left ear. This, of course, proved that there existed some occlusion of the auditory canal or a disease of the middle ear. Upon introducing an ear speculum I found a dense black mass of impacted cerumen, and it was one of the densest and hardest masses of cerumen I had ever been called upon to extract and I only succeeded after repeated syringing with a Pomeroy syringe and warm water.

After removal of the cerumen I found the tympanum thickened and very red and without the brilliant polish usual to that membrane and no light spot. The patient could now hear the watch at a distance of three inches.

I introduced a small piece of borated cotton in the auricular canal to exclude the cold air, from this, but lately covered drum, and directed the patient to call again. I did not see him again for two weeks, and on his return, I with difficulty recognized him. He said his cough had almost entirely ceased, that he had no more night sweats, no pain in the thorax, slept well, temperature normal and, as he declared, had a most glorious appetite. He had gained about ten pounds in weight. This most unexpected change in the patient's condition, of course, interested me greatly and as I found that he still expectorated slightly I secured some of the sputa and had it examined for tubercular bacilli. The results of the examination were negative.

I saw the patient four weeks afterward and he had rapidly gained flesh, his cough had entirely ceased and all other general symptoms had disappeared. He said he felt entirely well and was soon to go to work. Upon examination the ear showed an almost healthy drum membrane slightly sunken. The light spot had returned but slightly out of position and diminished in size. Hearing for watch in this ear was good at four feet.

The pressure and irritation of the impacted cerumen upon the tympanum causing reflex cough had evidently given rise to the patient's general symptoms. The incessant coughing caused a laryngitis and bronchitis, and to them were due the rise of temperature and general debility; and the great strain upon the diaphragm and thoracic muscles, accounted for the thoracic pain.

This was in the months of February and March. I saw the patient the last time on the second of July and he appeared in perfect health and weighed about 155 or 160 pounds. When I first saw him he only weighed at the best 105 pounds.

Although these cases are exceedingly rare, there being only one or two on record, yet this one case, showing such a fearful result from such an obscure cause, and one which, as shown in this case, is so readily overlooked, may prove of some interest and value to the general profession. —*Miss. Med. Monthly.*

TREATMENT OF VOMITING OF PREGNANCY.

Routh states that in seven years' practice he has always been able to arrest the vomiting of pregnancy by brushing the cervix and lower cervical canal with a mixture of equal parts of iodine, iodide of potassium, spirits of wine and water.

In general the vomiting ceases immediately after the application. If the vomiting should recur, the cervix should again be brushed. Generally after this the vomiting will be permanently relieved.—*Therap. Gazette.*

Selected Formulæ.

COD LIVER OIL EMULSION.

℞
Cod liver oil.....8 fl. oz.
Yolks of eggs.....2.
Tragacanth in powder.....16 grains.
Tincture of benzoin.....1 fl. dram.
Spirit of chloroform.....4 fl. drams.
Essential oil bitter almond.....8 minims.
Water to make.....16 fl. oz.

Sig.—Rub the tragacanth with a small quantity of the oil, then add the egg, and with constant trituration water and oil alternately and the flavoring ingredients until the emulsion is completed. About two fluid ounces of water will be needed.

—*Br. and Col. Druggist.*

DIPSOMANIA.

Alexander gives the following as a good remedy to enable drunkards to resist the drink crave:

℞
Tinct. capsici.....M x.
Sodii bromidi.....gr. x.
Spirits ammoniæ.....℥ i.

Sig.—Give at a dose several times daily.

—*N. Y. Med. Jour.*

ANTISEPTIC POWDER, IMPROVED.

Cheap but reliable substitutes for these expensive proprietary preparations, as well as for iodoform, however, are always in demand. The following formula is used largely in the hospital wards of a city institution in the treatment of chronic ulcers, suppurating sores, and generally as an iodoform substitute:

℞
Salol, powdered.....℥j.
Sulphite of zinc, powered.....℥iss.
Benzoin, powdered.....℥ss.
Purified talcum.....℥ij.
Oil of fennel.....M xx.

M. et. sig.

—*American Druggist.*

CHRONIC DIARRHŒA WITH INTESTINAL FERMENTATION.

℞
Salol.....3 parts.
Castor oil.....15 "
Rhubarb.....30 "
Gum arabic.....10 "
Water.....120 "

Mix. A tablespoonful every hour till the bowels move.

—*Le Prog. Med.*

GONORRHŒAL ERECTIONS.

PILLS.

℞
Camphor.....2 grammes.
Opium extract.....0.2 gramme.

For 20 pills; 4 pills to be taken at night—1 every 15 minutes.

—*Jour. des Mal. Cut. et Syp.*

CHRONIC RHINITIS.

In the remedial treatment, the following has proven of service, used with the atomizer twice or thrice daily. If used as a douche, dilute with two or three parts water. Note: The iodine is decolorized in preparation, a clear solution of light amber color resulting.

℞
Sodii boras.....½ drachm.
Sodii bicarb.....1 drachm.
Aquæ puræ.....2 ounces.

Dissolve and add

Acid carbol.....15 grains.
Tinct. iodi.....3 drachms.
Listerine.....q. s ft..4 ounces.

Mix.

—*Med. Brief.*

The following may be given with benefit to allay the craving for alcohol, and to some extent take its place:

℞
Spt. ammon. aromat.....℥ii.
Tinct cinchonæ.....℥iiss.
Tinct. capsici.....℥iii.

Sig. A large teaspoonful in half a tumblerful of effervescing potash water every hour.

—*Whitla's Dictionary of Treatment.*

ANTISEPTIC MOUTH WASH.

Muller advises:

℞
Acid thymic.....gr. iv.
Acid benzoic.....ʒ ii.
Tinct. eucalypti.....℥ ss.
Spt. vini. rect.....℥ iii.
Ess. menth. pip.....gtt. x.

Sig.—Drop enough into a glass of water to cause turbidity, and rinse the mouth morning and night.

—*Med. Rec.*

THE PREVENTION OF OPHTHALMIA NEONATORUM.

The New York Legislature passed the following act, to take effect on the first day of September, 1890: Sec. 1. Should any midwife or nurse having charge of an infant in this state notice that one or both eyes of such infant are reddened or inflamed at any time within two weeks after its birth, it shall be the duty of such midwife or nurse having charge of such infant, to report the fact in writing within six hours to the health officer or some equally qualified practitioner of medicine of the city, town or district in which the parents of the child reside. Sec. 2. Any failure to comply with the provisions of this act shall be punished by a fine not exceeding one hundred dollars, or imprisonment not exceeding six months, or both. If the provisions of this act are enforced a very marked reduction of the blind will result.—*Boston Medical and Surgical Journal.*

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THE MEDICAL AND SURGICAL REPORTER.

SATURDAY, NOVEMBER 12TH, 1892.

THE PRACTICAL VIEW OF ECTOPIC PREGNANCY.

Theory and practice go hand in hand in the general application of medicine and surgery in the ordinary routine of the physician only so far as is best for the ultimate good of the patient. This is another way of saying that if theory cannot promise better results than tried and therefore applied therapeutics or surgery, these latter are to have the preference, and the problematical remedy is to be left for a less urgent occasion where no life is involved. For the every-day practitioner, and for him especially who is alone, and must rest his case on his own ability to rise equal to any emergency, and where the possibility of so doing depends entirely on his previous experience, reading, and natural bent, the question of speedy resort to surgical interference in ectopic gestation where the symptoms are urgent, is always a matter for grave consideration. This grave accident in the childbearing woman, may from its incipiency be ever on the verge of disastrous rupture, and on the other hand may rupture without accident, and the fœtus die or go on to full term. With these facts before him what is the obstetrician in general practice to do. It is easy enough in a large medical centre like Philadelphia, where a score of men ready to operate are always at hand, to make a speedy resort to surgery, without delay, with a fair chance of saving the patient. It is first imperative to understand what the common symptoms of ectopic gestation are, in order to be on the lookout for it. In the first place it is to be thought of in conception after long sterility; it is to be kept in mind in sudden accident in those who are illegitimately pregnant. It is to be considered as a possible contingency in those women who have a longstanding pelvic inflammation with a more or less extended period of sterility. The pathology of these conditions as related to the condition of pregnancy will not be here discussed. Sudden attacks of pain in pregnancy after or in any of these conditions, ought to be regarded with concern. Examination carefully made, after the occurrence of pain, may reveal the presence of an unatural swelling in relation with the uterus, and if along with this, there are present symptoms of pregnancy, the patient ought to be dealt with as a suspect, and her condition determined, by careful consultation. This early done will give her the benefit of any doubt, will antedate probably any dangerous period in pelvic inflammatory disease apart from ectopic, and anticipate all complications arising therefrom. This rule will apply in the non-fulminant ruptures of the ectopic sac. In these latter there is no time left in which to seek consultation. The woman is found in collapse, pulseless,

and suffering excruciating pain, or with a history of it.

There is no time left for delay. The delay that falters is the same that kills, and speedy aid must be afforded. To have success in these cases must not be considered certain by the casual operator. We read too often that the cases when operated on are sure of recovery. This means in surgical hands, in clean hands, in expert hands, that can open the abdomen, tie off the bleeding vessels, wash out the masses of clot and debris, without delaying to be clean, or to get clean, or to stop and wonder along the road of operation.

Unless a man can do all this, his patient has about as good a chance of getting well without surgical interference as with it, and this is saying very little.

The surgery that gives success equally in all hands has not yet been discovered. Good result and bad will always be had in every department of the art where the skill is variable. The safeguard of every community, no matter how situated, is to see to it that it has and encourages some man by its support to devote himself sufficiently to such study and investigation as will enable him to rise equal to an emergency of this order with good hope of success. To know the best and speediest way of controlling the hæmorrhage of ectopic gestation is one thing; successfully to accomplish this is another, so far as after-results are concerned.

The main point is, in this as in all other delicate surgery of the abdomen, to know how to be clean. To be clean physically, not to trust to chemicals. The man who is dirty till he is disinfected with sulphur, chlorine and carbolic acid, will be essentially dirty after he is through with all these. Like seeks like, and if he is not by habit clean he will do a dirty operation. In all obstetric and gynecological surgery the road to success lies by the way of clean body, clean clothes, clean instruments, clean beds, and clean patients and nurses. The man who has not these, and is not all of this, in his ideas and requirements, has only luck if his results are good, and his desserts if they are bad.

A MIGHTY BAD RISK.

He was a man well along in middle age and was willing to be insured. The agent had prepared his "application," and turned him over to the searching scrutiny of the accomplished medical examiner. "I might as well tell you, doctor, to begin with, that ours has been a family of fatalities and sudden death," said the applicant. The examiner looked serious as he replied: "Why, you seem to be in excellent physical condition. What did your father die of?" "Heart disease." "That's bad. How old was he?" "Ninety-two." "Um! And your mother?" "She's gone too. Killed at a crossing." "And her age?" "Mother was a little over 79." "Do you know the age, and cause of your grandfathers' deaths?" continued the examiner. "Yes, indeed. Father's father died just a week after his 90th birthday. They say he used too much tobacco. Mother's father was only 88. Falling down stairs finished him." "And your grandmothers?" "One of 'm had consumption at 86, and died of it in no time. The other was nipped by a sunstroke at 84. Oh! they all went quick." The examiner did not seem so grave as he asked: "Have you any brothers or sisters?" "One sister and two brothers," was the answer. "John went out into the mining country when he was 72, got into trouble there, called a drunken man a liar, and was shot. Henry was drowned at 69, trying to help save two young fellows that couldn't swim. Sister's alive. She's awfully careless; eat a lot of green stuff the day of her golden wedding, then danced in the evening with all the old fellows on the lawn, even after it was raining; took her two days to get over it. She'll go in a hurry like the rest some of these times.'

"Well," said the medical gentlem smiling, "Think I'll chance you, and don't believe your application will be 'turned down' at home office. Only you must look out for yourself. Be careful about catching hard colds after you are 80 years old."—*Chicago Post.*

Book Reviews.

A Manual of Medical Jurisprudence and Toxicology, by Henry C. Chapman, M. D., Professor of Institute of Medicine and Medical Jurisprudence, in the Jefferson Medical College, Philadelphia, with thirty-six illustrations. W. B. Saunders, 913 Walnut Street, Philadelphia, Pa. Price $1.25 net.

It is very necessary that every physician should have some knowledge of Medical Jurisprudence. The physician should know what the commonwealth expects and demands of him in his professional capacity, as well as to know his own rights as a medical expert. The author has written a plain, concise work, setting forth the leading facts, without going into lengthy discussions. We recommend the book to any one desiring more knowledge on Forensic Medicine.

Disease of the Kidney and Bladder, A Text-Book for Students of Medicine, by W. F. McNutt, M. D. etc., Professor of the Principles and Practice of Medicine, University of California. J. B. Lippincott Co., Philadelphia, Pa. Price $2.50.

This work is based upon a series of lectures delivered in the University of California. The nomenclature of kidney diseases is considerably simplified, especially of the inflammatory varieties.

A commendable feature of the work is the part devoted to the anatomy and physiology of the kidneys. The author very rightly says, a thorough knowledge of the anatomy, physiology and histology of the kidney is indispensable to the proper understanding of the etiology and symptoms of its pathological conditions.

BLACK EYE.

There is nothing to compare with a tincture or a strong infusion of capsicum annuum, mixed with an equal bulk of mucilage or gum arabic, and with the addition of a few drops of glycerine. This should be painted all over the bruised surface with a camel's hair pencil, and allowed to dry on, a second or third coating being applied as soon as the first is dry. If done as soon as the injury is inflicted, the treatment will invariably prevent the blackening of the bruised tissue. The same remedy has no equal in rheumatic, sore or stiff neck.—*Medical Times.*

Correspondence.

QUACKS.

Editor of MED. AND SURG. REPORTER.—In the last few months I have quite frequently happened to pass or to wait near an old Indian doctor who stands leaning against one of the stalls in a public market. His clothes are dilapidated and his dark face is shaded by a well worn broad-rimmed, chip hat. The only thing about him that would suggest his vocation is a black leather case, containing a number of small vials and a package of carefully cherished printed sheets, announcing the virtues of his vegetable remedies. Two or three times I have seen some one stop and ask him questions about his medicine, but as yet I have failed to see a sale accomplished.

Within half a mile of this camp-follower of our profession are two or three other doctors, occupying commodious and comfortable buildings, employing a staff of physicians and a corps of clerks and servants to flood the country with literature (pardon the word) announcing to the people at large, that the medical men of that particular institution have, in some manner not very clearly explained, gained a better knowledge of disease and a greater skill in its cure than ordinary physicians and surgeons who have yet to learn the value of a proper combination of paper and printers' ink. The men in charge of these institutions are well-dressed and prosperous; they and their assistants are graduates of medical colleges, and conform to the letter of the laws regulating medical practice. By the laity they are looked upon as desirable citizens, their social status is good and they may even take an active part in church work.

Here are the extreme phases of irregular practice, the one such as to excite our ridicule and pity, the other holding out, with the apparent frankness of methods customary and legitimate in ordinary business, the hope of speedy and certain cure and by a combination of some degree of medical knowledge, of fraudulent generalizations as to its abilities, and a shrewd commercial spirit, this caricature of our profession has established itself too firmly to call forth an expression of mirth. There is a short, crisp word which we could apply with impunity to the Indian

doctor, but it would be a dangerous, perhaps a costly experiment to name by this word any of the better clothed and better housed advertising physicians. Any difference of opinion between the regular medical profession and other bodies of medical men ought to involve no condemnation nor hostility as long as those differences are held in good faith and do not apply to matters of integrity and decency of conduct; but if possible, there should be such a definition of the word *Quack* adopted by the medical profession that that word could be used when occasion requires with fixed meaning and without the risk of legal procedures. A physician's legitimacy depends upon two factors, first that he shall have been properly prepared for his work, secondly that he shall carry on his practice in a becoming manner. In the writer's opinion any one who departs seriously from either of these requisites should be denominated a quack. To be more explicit, the following definition is offered:

1. A quack is a person practicing medicine without having graduated from a genuine medical college (except a medical student practicing for the sake of experience or any one rendering temporary relief as a matter of charity.)

2. A quack is a person, whether regularly graduated or not, who advertises his medical qualifications in public prints, circulars or by any other means except the sign and office card employed in the manner established by custom. This statement should not be construed as offering any objection to a physician's becoming well-known socially or in any non-medical way unless his social, scientific or other pursuits are mere subterfuges to enable him to advertise himself as a doctor.

3. Qui quackit per alium quackit per se.

It is becoming altogether too frequent an occurrence that physicians connect themselves with some advertising institution (no allusion is intended to properly conducted and properly advertised hospitals and sanitaria) expecting ultimately to join the ranks of the regular profession which is quite too lenient with its pardon for these who are ready to abandon their sins against medical ethics and be received into the membership of a county society. Without exceptionally favorable opportunities, it requires considerable hardship and self-denial for a man to establish himself as a physician and it is by no means encouraging to one striving to be decent and "ethical" in the midst of such trials to see some one else take the easy but disreputable road around the difficulties of the first few years of medical practice and reach the same goal toward which he is himself struggling. Better failure than such success, for of the fifteen or twenty per cent. of medical graduates who abandon practice, more do so from lack of persistence or on account of better inducements in other fields of labor than from lack of ability.

I have known men to teach school, operate telegraph instruments, sell books, represent wholesale pharmacists, work in drug stores, manage Turkish baths, practice stenography, cut hair, sell tin-ware, wait at hotel tables, because they were not in circumstances to begin the practice of medicine for which they were prepared. For all these men I have had a wholesome respect. On the other hand, men better qualified intellectually than the majority of those referred to, men who previously supported themselves in other ways, have deliberately gone into advertising medical institutions, either with the intention of following such a life or as a make-shift till an opportunity for embarking in regular practice should present itself. A physician,* speaking with reference to the ingratitude of these men to their alma mater compared them to "foul birds which soil the nest in which they have been reared."

The writer has no personal motive in pronouncing an invective against this particular form of irregular practice nor does he consider it as a graver evil than those species of quackery whose symptoms are more striking. He simply wishes to call attention to it as an evil which has insidiously fastened itself upon the medical profession and of whose importance few are cognizant.

A. L. Benedict, A. M., M. D.
Buffalo, N. Y.

COCCYDYNIA.

Whitla recommends the following suppository employed at bed-time:

℞ Ext. belladonnæ ..... gr. ¼.
Ext. hyoscyami } ..... āā..gr. ¾.
Iodoform }
Ol. theobromæ ..... gr. xx.

—*Med. News.*

*Prof. Chas. G. Stockton of the University of Buffalo.

Periscope.

THERAPEUTICS.

THE TREATMENT OF SKIN DISEASES.

At the meeting of the American Dermatological Association, recently held in New London, Conn., Dr. Condict W. Cutler, of this city, read a very interesting paper on the treatment of certain skin diseases by the use of an irritant application composed of iodine, carbolic acid and chloral, in equal parts. He stated that perhaps in no branch of medicine has greater advancement been made than in dermatology, so far as the pathology and diagnosis are concerned, but that in the treatment of skin diseases, especially in the chronic forms, very little improvement is found. The trouble is that we are too apt to use bland and soothing applications, and the remark once made by a distinguished dermatologist that the "basis of all treatment of skin diseases is grease" still is true.

A slight, stinging pain is first produced, which is soon followed by a decided numbness of the skin over which the solution is painted. This solution possesses strong antiseptic, antiparasitic, antipruritic, antiphlogistic, analgistic, anæsthesic and absorption properties. It penetrates deeply into the tissues of the skin not only hastening the absorption of inflammatory products but being itself readily absorbed.

The chief therapeutical advantages of the mixture are due to its penetrating action into the tissues, its rapid destruction of all forms of micro-organisms, and its wonderful power in hastening the absorption of inflammatory products. He considers it especially serviceable in parasitic skin affections and in all forms of chronic skin diseases characterized by thickening and induration of the skin, accompanied by scaling and itching.—*Ex.*

DENTAL USES OF THYMOL.

In the *Deutsche Monatsschrift für Zahnheilkunde,* January and April issues for 1892, A. J. Hartmann calls attention to the value of thymol as a medicament in the treatment of acute pulpitis, claiming for it an antiseptic and germicidal action which is sufficient to arrest the inflammatory proeess resulting from microbic infection without exerting any escharotic effect upon the pulp-tissue. He cites cases of pulpitis with exposure successfully treated by thymol in substance, and recommends it as decidedly superior to carbolic acid as a preliminary treatment to the capping operation, which he asserts may be successfully performed after a sufficient treatment with thymol.

A limited series of experiments made with this drug fully substantiate the claims which Hartmann makes for it. The application may be made either by applying a small crystal or a powder of the pure drug directly to the pulp, and sealing it in under a suitable temporary stopping. A saturated solution of thymol in chloroform may be used on cotton, or the drug may be melted in a small capsule of metal or porcelain, and a pellet of cotton or small disk of blotting-paper dipped into the fluid thymol and applied. The drug possesses the peculiar property of remaining fluid long after its temperature has fallen below its fusing-point, which gives ample time to apply it to the pulp-exposure before solidification takes place. In every instance so far as tried, relief of pain instantly follows the application. In deep-seated caries with great sensitiveness of dentine where it is proposed to temporarily fill with gutta-percha, very satisfactory results have followed from touching the warmed and plastic gutta-percha to the surface of a thymol crystal, which slightly softens the surface of the gutta-percha by its solvent action, renders it adhesive as does chloroform or cajuput, and when inserted exerts an antiseptic and obtundent effect upon the dentine. Its use in this way suggests the possibility of its value as a component part of the gutta-percha temporary stopping material in the preliminary treatment of cavities with sensitive dentine.—Edward C. Kirk, in *Dental Cosmos.*

ALCOHOLISM AND ITS TREATMENT BY STRYCHNINE.

In a pamphlet recently published in Tena, G. Beldau discusses all the papers, hitherto published in Russia and France, on strychnine treatment of alcoholism. Of peculiar interest and importance are the animal experiments performed by S. W. Jaroschewski, which demonstrate that in dogs strychnine possesses the property of neutralizing the inebriating action of alcohol, and that dogs that are given

strychnine and alcohol at the same time, are under incomparably better vital conditions than dogs taking alcohol alone. The latter died spontaneously, without an exception, while the former (excepting one who died from strychnine poisoning) continued living.

The result of experiences in man is the following:

1. Strychnine is a physiologic antagonist of alcohol, and treatment of alcoholism by nitrate of strychnine gives more or less favorable results.

2. The best results are obtained in dipsomaniacs, less good results in chronic drinkers.

3. The higher the doses, and the longer the treatment is continued, the more satisfactory is the result. Luton administered grm. 0.005 subcutaneously, or grm. 0.03 internally, 3 times daily; Korona, grm. 0.005–0.01! once daily, and noticed gradual disappearance of the longing for alcohol after a few injections.

4. Alcoholics support disproportionately large doses of strychnine without secondary phenomena, without accumulative effects.

5. It appears that strychnine has the property of eliminating the craving for alcohol in the potatory.

The author engaged in experiments in the clinic of Tena abstains for the present from an expression of his own views on the value of the remedy, promising some early communications on the subject. — *Can. Lancet.*

SURGERY.

THE DIAGNOSIS OF HEAD INJURY FROM DRUNKENNESS.

Dr. L L. von Wedeking writing to the *Lancet* on this subject, makes the following interesting statement:

A cell, or even a police station, is not a good place to form a correct diagnosis, and the frequency with which one finds symptoms very much obscured by alcohol is well known to police surgeons. A method which I employed while engaged in a very active emergency service in New York City, and which to-day is in extensive use in this class of cases, answers every purpose desired, and is more easy of application and devoid of the danger attendant upon the inhalation of ammonia. By pressure upon the supraorbital notches, compressing the nerve, a diagnosis of alcoholism may with absolute certainty be made in a few seconds, thus differentiating on the spot between coma due to alcoholism, injury or disease. Where no result is obtained, one may, with almost positive certainty, look for some other cause of coma. In no case have I failed with this method, and so certain became I of its infallibility that, without waiting to further examine for head injury where no result was obtained, I took the patient to the hospital sure of a "case." A case of alcoholism pure and simple will, upon the application of this pressure, immediately show very evident signs of life, and, be the coma ever so deep, the effect of the alcohol will for a short time be sufficiently removed to permit a thorough and rapid examination. The absence of result from this method should at once cause great suspicion of some cerebral trouble due to injury or disease. I would add, that to quiet hysterical convulsions, in hiccough, in alcoholic mania and for the detection of malingerers, there is, to my mind, nothing superior.

HOW TO POULTICE THE EAR.

Poulticing an ear may seem to be a simple operation, but there is nevertheless a right and a wrong way of doing it, and it appears that the wrong way is the one usually adopted. At least, so says Dr. Alfred H. Buck, of New York, in an article on aural therapeutics in the March number of the new *International Medical Magazine.* Dr. Buck says that while heat is one of the best remedies in painful inflammations of the middle ear, and the poultice is one of the best methods of applying heat, as usually put on the poultice has little effect. What should be done, he says, is first to fill the external auditory canal with lukewarm water, the head resting on the unaffected side upon the pillow. Then a large flaxseed poultice is applied over the ear as hot as it can be borne. The column of water is thus kept warm and acts as a conductor of heat between the poultice and the inflamed surface.

EVILS OF CATGUT.

Some interesting experiments have been made by Klemm (*Bull. Gen. de Therapeut.*) in which was demonstrated from an aseptic standpoint the superiority of silk over catgut for suturing wounds. When

catgut is employed in surgery, suppuration occurs in spite of all precaution. This led Klemm to suppose that the catgut, itself sterile, afforded a favorable culture medium for the development of such germs as get into a wound during an operation. To ascertain the correctness of his views, he made a number of comparative experiments on cats and rabbits with silk and catgut, with results as above indicated. The gut, after being used, and then placed upon a gelatine culture medium, developed as many as 2,500 colonies, while silk, similarly treated, showed only seventy-five. He, therefore, concludes that catgut, notwithstanding the thorough method of sterilization, as employed by such men as Riverdin and Brunner, is unfit for employment in surgery.

MEDICINE.

TREATMENT OF VOMITING.

Dr. H. B. Lowry says (Kansas City *Med. Index*) that for vomiting, arising from various causes, but especially that of gastritis, pregnancy and phthisis, the remedy par excellence, the action of which, when all others have failed, is indeed most gratifying, is tincture of iodine, ten drops to be taken in water, in divided doses after meals. In the graver lesions of the stomach, such as dilatation, gastric ulcer, cancer, etc., there is much minutia in the treatment, as regards diet, drugs, their methods of administration, and the position the patient should assume under certain conditions, to which the conscientious practitioner must give due diligence. He also calls attention to the discussion that has been going on of late in regard to internal antisepsis, the opinion of the German physicians being that it is very doubtful whether antiseptics given by the mouth ever reach the intestine; they are probably absorbed in the stomach; however, calomel given with this view, where the trouble was not serious, has been thought to be beneficial. In several severe cases of dysentery in a London hospital, after utter failure with the use of opium, lead, ipecacuanha and bismuth, there was tried an enema of alum—half an ounce to the pint of water, twice daily, and in each instance complete recovery resulted. In one instance the disease had been of many years standing, but the result was equally gratifying.

THE DISEASES AND ACCIDENTS OF GREAT CROWDS.

The medical history of the great Columbian celebration, which produced so much enthusiasm in this city last week, deserves some attention, and if it could be completely written would prove most interesting. There were probably four hundred thousand or five hundred thousand visitors during the week and perhaps a quarter of a million persons crowded the streets along which the parades were held. It is estimated that two hundred persons were more or less hurt or taken ill. The census as gathered by newspaper reporters from the police reports and hospitals makes the number about one hundred. Our readers will be interested in the list, as showing the accidents and diseases of great crowds. It is as follows:

Fainting, 35; hysterical seizures, 3; epileptic fits, 11; sprains, 3; run over, 3; fractures, 10—1 of the arm, 2 of the skull, 7 of the legs; falls, 11; cramps, 1; dislocation, 1; burned, mortally, 1; struck by a brick, 1; "taken sick," 13. Total, 94.

This shows that fainting is the most frequent pathological phenomenon, that crowds are bad for epileptics, that falls and fractures are numerous, and that delicate people are liable to be "taken sick." On the whole, the record is not a bad one, considering the enormous congregation of people. The reports also show that the sick and injured were promptly and efficiently cared for and our much abused ambulance service evidently did yeoman's duty on the occasion.—*N. Y. Med. Rec.*

NEURALGIA OF THE TOE.

A neuralgic pain, more or less severe, at the base of the fourth toe is not uncommon, but has attracted medical attention only within recent years. Dr. Morton of Philadelphia, in 1876, was the first to describe it, and to report a number of cases. He had himself suffered a great deal from it.

The attacks always come on suddenly. He was often obliged to remove his boot, sometimes when walking in the street, sometines when riding in his carriage, and sometimes even when in company. When on horseback he has been compelled to dismount, tie his horse to a tree, and lie on the grass, unable to proceed further.

He found the affection much more fre-

quent in women than in men—a result, no doubt, of the greater delicacy of women's feet and of their wearing tight shoes.

Dr. Bradford, to whose paper on the subject, read before the Suffolk Medical Society, we are indebted for our facts, says that his own investigations in respect to this ailment accord exactly with those of Dr. Morton; that the symptoms were the same, and the proportion of male and female patients about the same.

One of Dr. Bradford's case was that of a young lady obliged to stand all day. She was in excellent health, but for years had suffered from pain in her right foot, radiating from the base of the fourth toe. Her shoes were made with great care, but she suffered all the time, and sometimes the pain was so intolerable that she would willingly have submitted to a surgical operation for relief. She was relieved by treatment and properly constructed shoes.

The following is, in brief, an explanation of this metatarsal neuralgia," or "Morton's affection of the foot." The base of the fifth, or little toe is in a line with the neck of the fourth toe's corresponding joint, and by becoming pressed against the nerves of the latter, it irritates and inflames them.

The pain which results is sometimes only of a dull character, but sometimes is severe and throbbing, and may extend above the ankle. As in other neuralgic pains, there is no inflammation to be seen nor any swelling.

In most cases protracted rest and the use of quite broad-soled shoes will effect a cure; but sometimes the excision of the head of the fourth metatarsal bone is necessary.—*American Analyst.*

TREATMENT OF DIPHTHERIA WITH ARSENITE OF COPPER.

Success in the treatment of diarrhœa and dysentery with arsenite of copper, at first recommended by Dr. Aulde, of Philadelphia, suggested the idea of its use in diphtheria, on the ground that it was the alimentary system that was involved in both cases. The first of October, 1891, an epidemic of modern severity made its appearance in this city, and lasted for several months. My cases, varying in age from one to ten years, were put upon the arsenite treatment, which was supplemented by small doses of calomel when it was needed on account of constipation. Inunction with sulphate of quinine suspended in glycerin was practised in all cases, usually repeated every four hours. How much quinine was absorbed I do not know, but the plan keeps the skin in good condition. Where there was much cough or hoarseness, equal parts of glycerin and any good wine were given with the arsenite, or, if that was not agreeable, one per cent. of benzoic acid, combined with powdered sugar, was dropped on the tongue and repeated as often as thought necessary. No local applications were made; the surroundings were looked after; and when (as happened in some of the cases) little food could be taken, an effort was made to induce them to take water freely, either plain or in the form of lemonade. None of these cases were malignant, none died, and none suffered from unpleasant sequelæ. Such a short experience in the treatment of such a disease ought not to count for much, but I feel certain that the plan will prove (to say the least) as successful as any, while its application will be more agreeable to all concerned.—*Indiana Medical Journal.*

OBSTETRICS.

THE PROPER METHOD OF APPLYING OBSTETRIC FORCEPS.

Dr. Henry D. Fry urges, as the only rational method, the application of the forceps to the sides of the head of the child without reference to its position in the pelvis. He refers to a former paper in which it was stated that fifty-one per cent. applied the blades in transverse diameter of the mother's pelvis without reference to the position of the head, and eleven per cent. observed no rule and followed either method. He admits that had the great body of the profession been consulted, the majority would be found to apply the forceps according to the German method, and also that in some cases it may be and is impossible to do otherwise. Certainly the difficulties of application are increased when the first method is chosen, and it would be better for a beginner to resort to the second until some facility is acquired. In France the practice to apply the forceps to the sides of the head even when transverse at the brim, and the ideal method of extraction is to apply the instruments in such a manner that during traction the

fetal head is free to execute all the movements that would occur were the labor normal. To accomplish this it is necessary: (1) To grasp the sides of the head with the blades. (2) To make traction in the axis of the pelvic canal. (4) To secure mobility of the head during its passage, by the use of Tarner forceps. The Hodge style of forceps should not be used when their application is made without reference to the child's head, and the Simpson style (Elliot) should not be used when their application is to be made to the side of the head. Dr. Fry's conclusionsa re: (1) Anæsthetize the patient and place her in proper position—buttocks well over the edge of the bed, and each limb supported by an assistant. (2) Ascertain the position of the head, introducing within the vagina two or three fingers, or if necessary, the whole hand. (3) Apply the blades of a Hodge type of forceps to the sides of the head, with the concave edge directed toward the occiput. If for any reason this cannot be accomplished, withdraw the instrument and substitute a Simpson (or Elliot) passing the blades to the side of the pelvis. While making traction with this method, watch for an terior rotation of the occiput, and encourage it in some cases by re-applying the blades to better advantage. (3) Make every effort to secure antiseptic condition during the operation. The fingers, hands and forearms of the operator, the external genitalia and vagina of the patient, the instruments and the hands of the assistants, should be clean and aseptic.—*Am. Jour. Obst.*

TREATMENT OF METRORRHAGIA.

In certain cases of obstinate metrorrhagia, ergotin, extractum hydrastis Canadensis, ice, and applications of tampons are alike incapable of arresting the hæmorrhage. In such cases a hypodermatic injection of sulphate of atropine has been recently recommended. It is given in doses of $\frac{1}{200}$ grain twice daily. In one case in which the hæmorrhage had existed for a fortnight, it was completely arrested after a fourth injection. In a second, when the patient was in a state of collapse, the first injection was followed by a return of the normal temperature and increase of the pulse-rate; after the second the hæmorrhage was diminished in a striking degree; after the third it entirely ceased. A moderate dilatation of the pupils was the only secondary effect observed.—*The Provincial Journal.*

HYGIENE.

SIMPLE TESTS FOR IMPURITIES IN WATER.

The following methods of determining the presencc of impurities in water are given by Walling: 1. For organic matter put a little of the sample into a beaker, add two or three drops of dilute sulphuric acid and color distinctly with a solution of permanganate of potassium. If much organic matter is present the color of permanganate becomes discharged almost immediately; if less or very little, it takes longer to decolorize. If the color has not changed in twenty-five or thirty minutes it is safe to assume that organic matter was not present. This is a tolerably reliable test. 2. For nitrites, a little sulphuric acid added to the water forms nitrous acid if nitrites are present, which is easily detected by its power of liberating iodine from iodide of potassium. A little starch paste is mixed with a small quantity of a solution of potassium iodide, and the mixture added to the suspected water containing the sulphuric acid. If nitrites are present the nitrous acid formed liberates the iodine from the iodide, which turns blue with starch. This indirect method is a ready means for detecting the nitrites if present in not too small a quantity. 3. Nitrates are detected by converting into nitric acid, which turns morphia red. A portion of water is evaporated to dryness, the residue treated with a drop of strong sulphuric acid (which makes nitric acid of the nitrate) and a portion of morphine added. If nitrate is present the morphine gives red color. 4. For ammonia, Nessler's reagent is by far the best test. It may be made by dissolving eighteen grains of oxide of potassium in a little water, adding solution of mercuric chloride until the red iodide of mercury first formed redissolves upon agitation. To this is added a solution of fifty grains caustic potassa and distilled water to make eight ounces. This reagent will detect 0.00375 of a grain in a pint of water by giving a yellow color. A

reddish color or precipitate forms with larger quantities of ammonia. 5. Albuminoid matter requires a more elaborated proceeding for its detection. If all of the above were found it is hardly necessary to go to the trouble of looking for albuminoids; the water would be unwholesome even if they were not present.—*Pharmaceutical Era.*

HOW LONG SHOULD A DIPHTHERIA CASE BE ISOLATED.

This most important question is discuosed by Dr. Prince, in the *Boston Medical and Surgical Journal:* It is a matter of vital importance, for Dr. Prince tells us of a case wherein the patient, supposed to be well, made visit to relations in Boston niue days from the date of his "getting up." One week after his arrival, a child in the family was attacked with diphtheria and died. An out-break of diphtheria, in a hotel at Nantucket, fallowed the arrival of a person just recovering from diphtheria, and pronounced well by the attending physician. One of these cases, when supposed to be well carried it to a hotel in town. Three cases of diphtheria in one family, closely followed the advent of a nurse who had just come from attendance on a fatal case.

Dr. Prince thinks that evidence goes to show that poison is retained in the mucous membrane longer than is generally considered to be the case. In lieu of definite knowledge he has adopted the arbitrary rule of advising quarantine precautions for one week after the patient appears to be perfectly free from disease. This seems to be a fairly safe rule and one that is desirable.—*Annals of Hygiene.*

NEWS AND MISCELLANY.

SOCIETY MEETINGS.

At the second annual meeting of the American Electro-Therapeutic Association, held in New York, October 4th, 5th, and 6th, the following officers were elected for the ensuing year: President Dr. Augustus H. Gœlet, of New York. Vice-Presidents Dr. William F. Hutchinson, of Providence, Rhode Island; Dr. W. J. Herdman, of Ann Arbor, Michigan. Secretary Dr. M. A. Cleaves, of New York. Treasurer Dr. R. J. Nunn, of Savannah, Georgia. Executive Committee: Dr. W. J. Morton, of New York, Dr. Robert Newman, of New York, Dr. G. Betton Massey, of Philadelphia, Dr. Chas. R. Dickson, of Toronto, Canada, Dr. J. H. Kellogg, of Battle Creek, Michigan. The next meeting is to be held September 12th, 13th, and 14th, 1893.

AN EXPLANATION.

A quack doctor stood on his wagon at the street corner selling his cure-all. A gronp of people gathered about him and he undertook to explain to them the an atomy of the throat. "My dear friends," he began) "perhaps you don't know it, but there are two passages that go from the back of the mouth to the stomach. One is called æsophagus and the other æsophagi. Now, the solid victuals go down the æsophagus and the liquids down æsophagi. Over the top of the holes is a cover with a hinge in the middle, and when you swallow beefsteak the little door over the æsophagus flies open, and the little door over the æsophagi drops down, and *vice versa* when you take a drink of coffee." This description proved too much for a farmer who stood on the edge of the crowd. Shaking with laughter; he remarked in a loud tone: "Gosh, but those doors must go flipper flopper when a fellow eats bread and milk."—*Youth's Companion.*

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY FROM OCTOBER 30, 1892, TO NOVEMBER 5, 1892.

The leave of absence granted Captain Henry P. Birmingham, Assistant Surgeon, U. S. Army, is hereby extended one month.

PROMOTION.—First Lieutenant Nathan S. Jarvis, Assistant Surgeon, U. S. Army, to be Assistant Surgeon, with rank of Captain, October 14, 1892, after five years service, in accordance with Act of June 23, 1874.

First Lieutenant Harlan E. McVay, Assistant Surgeon, U. S. Army, will proceed from Fort Wingate, New Mexico, to the camp south of Bisbee, A. T. and report to Lieutenant Colonel J. W. Barlow, corps of engineers, Commissioner of International Boundary line survey, for duty, relieving Captain E. A. Mearns, Assistant Surgeon, U. S. Army.

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Original Articles.

OBJECT LESSONS IN GYNÆCOLOGY.

By W. H. LINK, A. M., M. D.,
PETERSBURGH, INDIANA.

II.

IMPORTANCE OF PRACTICAL INSTRUCTION IN GYNÆCOLOGY.

If correct theory leads to correct practice, it is no less true that a theory is often modified, if not wholly exploded, by the truthful lessons derived from an application of a false theory to a condition that repeats itself so often in the field of observation and experience that harmful results may be traced to their causes.

Errors in gynæcology have been perpetuated for lack of practical instruction. Teachers and text-books have accepted the errors of predecessors in the field and, as conservatism seldom disputes authority, it has always been much easier to teach false doctrines than to formulate, explain, and defend correct ones. The reverence for authority is always soothing to mediocrity, and falsehood lifts its hands in holy horror when its idols are rudely shattered by the advance of either truth or time.

Modern times have seen more than one "system" in gynæcology rise, blaze out and die away before the advance of clinical experience. The mechanical theory of Hewitt, which explained every ill that female flesh is heir to by displacement, had its counterpart in Hodge, who furnished a pessary by which every ill was cured. The theory of ulceration armed every physician in Christendom with a stick of caustic and a bunch of cotton, and what one put in another wiped away. "Congestion, or pelvic engorgement," charmed dreaming students on the benches for many a day, and some old drone whose back has furnished a harvest for many generations of pewees, may yet be heard putting young men to sleep, crooning out the same old drivel. On such a teacher's table, the glycerine tampon and the wad of cotton lie lovingly beside the rusty old sound and the Ferguson speculum, quaint mementoes of the Dark Ages in gynæcology and universal accompaniments of the so-called conservatism. Cellulitis, leading to, or ending in, a condition in which nature is supposed to make a plaster-cast of all the internal pelvic organs by pouring into the interstices of connective tissue, liquid cement, which hardening, holds as in a vise, the organs which it surrounds; cellulitis yet furnishes wonderful triumphs to the old conservative, who whiles away many a profitable hour by squirting hot water against the vaginal vault to soften and dissipate the offending masses. All these theories were taught to class after class of students in our medical schools, sending them forth to freshen their memories along the same line, by a peep into their teachers' text-books, should they by chance let slip any one of the three or four things learned during the course, or should they by any mishap, have forgotten some one or two of the half dozen remedies that their teachers had tried to impress upon their minds as curative in these same three or four conditions. We have all seen laceration of the cervix raised almost to the dignity of a universal cause, and the operation for its relief hailed and heralded as a cure for evils that have since been found to lie far above the cervix. Stenoses and flexions had their day when dysmenorrhœa and leucorrhœa were explained by their presence, and cured by splitting or divulsing. Thus, while one camp stretched or split the cervix for a host of evils, the other wrought cures in the same cast of troubles, by stitching up a cervix that nature had lacerated in completing a physi-

ological act. These different theories have served their day. We now have a more modern fad, which has taken possession of the imaginations of men. That is, Electricity. There is one great advantage about this agent and its votaries which no other system ever possessed. It is independent of pathology, and diagnosis is superfluous. Pain is relieved, no matter to what it is due. Hæmorrhages are controlled, inflammations subdued, discharges dried up, solid tumors resolved, fluid collections dissipated, adhesions melted away, stenoses dilated, dilatations contracted, fungosities destroyed, secretion regulated, excretion promoted, nutrition favored, anæmia abolished, plethora cured. All that is necessary is that the condition or disease attacked must be hid, either in the general abdominal cavity, or in the pelvis. The agent is too modest to work where its results and processes can be seen. The thick abdominal walls furnishing a cover, miracles can be performed with as much facility as the East Indian juggler by his manipulations beneath a piece of cloth causes a mango plant to spring up in a few moments.

None of these many theories have been entirely false nor absolutely without value. Looking back at them now, we eagerly ask ourselves for an explanation of the long continued existence of the many harmful methods and instruments which hung about the practice of gynæcology, even after experience had exploded the theory upon which they were based. The answer at once suggests itself. The absence of anything like practical teaching.

In nine-tenths of the medical schools of this country, the teaching of gynæcology is the emptiest and most ludicrous thing imaginable. In the first place the chair of diseases of women is generally filled by a man, whose chief qualification is "inflooence." He has been able to lay pipe successfully, or he has served as an assistant to the man who has just become emeritus, thus perpetuating all the hobbies of his predecessors, or worse still, he is the son of his father.

> "Thus error's triumph once begun,
> Bequeathed from dirty sire to dirtier son,
> Though ever lost, is often won."

He contents himself with what is taught in the text-book and dares not differ from his favorite authority on anything, because his own experience is a safe one only when he keeps close to the shore where the fathers have the territory well marked off in their charts. His lectures are mere paraphrases of text-books, changed enough to prevent a too ready recognition by the students, and his power of independent thought and action are limited by that great badge of mental slavery, *conservatism*. Everything not laid down in the books, is reckless daring, or conscienceless mutilation; while everything endorsed by the authority of worm-eaten, moth-inhabited, and dust-covered text-books, is denominated conservative. Students are constantly warned against the evils of attempting anything of magnitude for a long time after going into practice. In a public discussion at the meeting of one of our important societies not long since, one of the speakers, a teacher in a medical college, said that he told his students not to buy a sound for three years after beginning practice, when it would probably be safe in their hands. How much better would it have been, had he taught them the practical and safe use of the instrument, before turning them loose upon a confiding and helpless community.

A large number of the colleges teach only didactically, while a few have what they dignify by the name of clinic, which consists of bringing a patient about once a week into a large amphitheater, exhibiting a breech presentation to an admiring class at long range, while the old professor stands by with a large buttonhole bouquet pinned to his lapel and, as his assistants or internes turn the revolving table with the patient on it so that every one in the room can see, he eloquently descants on some excrescence of the vulva, or a urethral caruncle. A lot of instruments are shown to kill the rest of the hour, when every man, after taking copious notes, rushes to the next clinic. Other schools, a little further advanced, have material enough, and variety, to spare; but some old fogy occupies the teacher's chair and nullifies the efforts of patient and student alike. His armamentarium consists of the inevitable sound, its twin brother, the old cylindrical Ferguson's speculum, a bunch of cotton, a bottle of glycerine, a bottle of iodine, and a box of vaseline. The patient is put on the table, the old reliable Ferguson is introduced, then the boys to the

number of thirty to fifty are passed around the lower end of the table, and, as they pass by in solemn Indian file, each turns his head and takes a peep. He looks down into that old Ferguson and sees bottom. He does not know what it is, but he is soon enlightened by the old professor, who informs him that she has had a vaginal catarrh, complicated with an erosion of the cervix, or a swollen condition of the cervical glands. The vault is mopped with iodine, and she is told to come again. After a student has seen bottom at the end of that old Ferguson a few times, has seen the changes rung on cotton and glycerine, iodine and glycerine as often, the science of gynæcology begins to have a sameness about it that fails to satisfy an inquiring mind, and he goes away to some other clinic, where a better teacher holds forth on some other branch of medicine, thoroughly convinced that no one knows much about the diseases peculiar to women, or that the science of gynæcology is very simple indeed.

I am told by reliable persons that in one of the most respectable medical schools in a large western city, the chair of gynæcology is occupied, (not filled), by an old medical ante-diluvian, who has never done a surgical operation of any kind, either plastic or otherwise, in all his life. Such a man, no doubt, thinks that the whole science of medicine in his specialty consists in whitewashing the vagina once a day with carbolic acid and glycerine, and looking wise in the presence of his students when he meets a case that refuses to yield to the whitewash system of therapy, and who, when a case so plainly surgical that it can not be ignored, comes before him, excuses his cowardice and ignorance to himself and class by naming it conservatism. There are some schools in this country where a system of practical instruction is attempted with the graduating class, and where the student has opportunities for personal examination and treatment, and may witness an application of the necessary surgical means of relief. But these schools are the exception to a very general rule, and may be justly looked upon as harbingers only of a brighter day.

Coming home with such a mental picture before him as every student must bring from such teaching as I have attempted to describe, is it any wonder that he soon becomes wind-skaken in doctrine, sun-cracked in knowledge, worm-eaten in method, and moss-backed in practice? The literature, current and otherwise, of the day only deepens his despair when perchance he rouses from his lethargy and seeks for light. He is constantly told by the great host of conservatives that it is only given to an inspired few to do anything like surgical work. That he, being a country doctor, living close to the gum-wax tree, must send for of those great men who have drunk deep and often at the great German fountains of surgical knowledge, to do all his important work for him. He is told by some of our text-books and men who fill most of the space in our special journals, that foreign cattle all wear long horns, and that unless a man lives *am Rhein Fluss*, and bears the mellifluous name of Klopstock, Kruminshingle, or Pullminoseoff, "his name is Dennis," so far as any excellence, surgical or otherwise, is concerned. Well, the average country doctor, being limited in means as well as time, looks at the map and sees that Germania lies beyond the sea; and, knowing that a course in one of her favored hospitals is beyond his means, he settle down to the inevitable, and contents himself with becoming a feeder for Gotham or some other center, when his patients have money. When they have not and his efforts fail to relieve, they are in the hands of nature and must do the best they can.

What we country doctors ought to know, and what we are beginning to know, is that better surgery to-day is done right in the Mississippi Valley and in Philadelphia, than in Germania, or any other foreign land. That it costs nothing, or but little, to see the work. That, with proper observation, and a reasonable amount of study and preparation, within the reach of all, the country doctor has done, is now doing, and may still do anything which the exigencies of practice demand, and in as successful a manner as if he had filled his belly full of beer, and his head full of hobbies at Vienna.

The Polyclinic at Philadelphia gives good practical instruction at moderate prices to small classes, and is in the reach of all who desire a post-graduate course of instruction. There are several very eminent abdominal surgeons who are doing an enormous amount of work, and whose technique is faultless, whose results are comparable

to the best in the world, and whose doors swing open to visiting physicians at all times. Eastman, of Indianapolis, is an honor to American surgery, a bold and successful operator, has an international reputation, and is always ready to show his work to the earnest seekers for knowledge. McMurtry, of Louisville, has lately been appointed to a chair in the Hospital College in that city, and will, no doubt, draw about him a large clinic, where any attending doctor, country or otherwise, can get lessons in operative gynæcology at small cost to himself financially, and of a kind that will leave nothing to be desired, from a practical standpoint. Hall and Reed and Ricketts, of Cincinnati, are doing a large amount of the best work, which can be seen by visiting physicians whenever they apply. Sutton, of Pittsburgh, has a large Sanitarium, and does all kinds of abdominal and pelvic surgery, with results equal to the best, and, as he is proud of his work, there is no doubt that any visiting physician might profit by even a short observation of his methods. The Prices in Philadelphia are doing more abdominal surgery than any other men in this country, and publish the lowest mortality. They have a large clinic, where the daily attendance ranges from 50 to 100, and a large private hospital in which every phase of abdominal and pelvic surgery is illustrated during the year, by daily sections, on selected subjects. They are ready at all times to demonstrate to visitors the results of pelvic disease, and the marvelous results of the very highest type of American surgery. With all these opportunities, and many others not named, open to the ambitious and conscientious surgeon, there is no longer need to go abroad in order to receive practical instruction, and he, who lets his patients die for want of knowledge, has none but himself to blame for his ignorance. There is already too much abdominal work done by the few, and too little by the many.

Consumptive.—Yes, the doctor says I won't live six months if I stay here. Is your section of Florida healthy?

Florida Man.—Healthy? Half the people down there want to sell and come North.

Eh? Why?

Tired of life.—*Tid-Bits.*

CORNEAL ULCERATION AND ITS SEQUELÆ.

By ARTHUR D. MANSFIELD, M. D.,
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The importance of ulcers of the corneal substance of the eye cannot be over-estimated, nor can too much stress be put upon the treatment or the early recognition of such destructive changes in the eye. No structure is at the same time so amenable to treatment and so capable of disastrous results following malpractice or tardy treatment as that seen in ulceration of the cornea.

The structure of the cornea is such that any changes whatever that affect its transparency (and all changes do impair the cornea to a greater or less extent) impairs naturally the vision of the eye affected.

The usual progress of an ordinary corneal ulcer is tolerably constant. Infiltration of the circum-corneal area followed by destruction of the laminæ of the cornea, with photophobia and injection of the conjunctival vessels and the deeper zone of vessels about the margin of the cornea, which is so characteristic of corneal troubles of all kinds—pain of the eye, both to light and touch, is always a symptom found in corneal troubles, and another annoying symptom which at this time may become very serious on account of the barrier it places to the proper treatment, is belpharospasm which is so grievous in some cases as to demand cauthotomy.

The diagnosis of a corneal ulcer is not always such an easy matter, especially in children on account of the inability of the examination to obtain a proper view of the cornea, and I would advised that the proper examination of the cornea be never neglected or thought of no consequence, for upon the proper or improper treatment is the future usefulness of the eye as a visual organ dependent. Many an ulcer of the cornea, has gone on to the complete destruction of an eye that could have been restrained had it been properly treated in the beginning. Let it always be remembered that in the treatment of an ulcer of the cornea, the first essential is to see whether an ulcer exists, its location, whether in the visual axis, i. e., before the pupil of the eye or whether peripheral,

the character of the ulcer whether deep or superficial. Often the proper view of the position of an ulcer will aid one in making a definite prognosis as to whether it will impair vision materially or not, which is a matter of extreme importance to the patient. When the efforts to open the eyelids prove futile by the ordinary means, then the use of a lid retractor will be of vast importance and considerable aid.

Is is not my intention to take up what is known as phlyctenular keratitis, which often simulates to a marked degree ulcers of the cornea, but to limit myself to the different forms of ulcers of the cornea, the treatment of the same and the effects of such ulcers when allowed full control of the organ.

Ulcers of the cornea, I take it, are classified into three chief groups which may be called superficial ulcers or those affecting the superficial laminæ only; second those penetrating deeper into the corneal substance and even through the membrane of Descemet with escape of the aqueous and hernia of iris or production of lenticular changes; third, serpiginous ulcers having a curved shape, often extending around the periphery of the cornea in such a manner as to give it the name of serpiginous.

Taking up the ulcers in the order in which I have divided them I will endeavor to give the history and treatment, reserving the sequelæ for my closing remarks.

(1.) Superficial ulcers are as a general rule very simple in their nature and very readily yield to treatment; the difficulty really lies in the fact of their recognition, often being very difficult to see by the ordinary means and in many cases requiring the use of a strong lens to throw oblique rays of light upon the cornea to detect their presence. I have often been struck with the different symptoms corneal ulcers of this character produce and have been at a loss to account for such manifestation of different symptoms from such simple ulcers. I say I have been at a loss to account for it upon other grounds than personal idiosyncrasy and predisposition. In some cases of superficial corneal ulcers there may be none of the usual symptoms, little or no pain, or photophobia, very small amount of lachrymation, eyes open, and, judging from the ulcer, more pronounced symptoms would be expected but few or no symptoms appear.

In another case the patient comes with head held down, eyes closed, complaining bitterly of the smallest ray of light, suffering severe neuralgic pains in and about the eye with profuse lachrymation, leading us to expect a severe and extended ulceration of the cornea when upon opening the eyelids forcibly we find only a small ulcer. It is these facts that lead one to rely only upon the ulcer "per se" in the diagnosis and prognosis of the case. Nothing I take it is more deceptive than a corneal ulcer when a diagnosis is made from the symptoms above without actual evidence of the ulcer itself. The diagnosis of the ulcer should then be made upon the evidences of proper inspection alone and when so made an intelligible prognosis and rational treatment given and followed. These superficial ulcers, may, as I have said, only affect the superficial layer of the cornea and do in point of fact, being occasioned usually from a traumatism of a slight nature such as a foreign body or blow in the eye which only wounds the cornea but does not penetrate its substance. Irritating substances often give rise to corneal ulcers of this character.

The treatment of these ulcers is simple in the extreme but simple as it is, may lead to very serious results if not followed out properly and early. I have found the use of eserine in this form of ulcers very good if much photophobia exists, if not the use of the yellow oxide of mercury salve in the proportion of four grains of the yellow oxide to one drachm of vaseline and making a delightful unguent as well as stimulant to the ulcerated parts, in connection with this the use of mercury drops, the corrosive sublimate being used in the proportion of 1:3000 to 1:5000. The drops to be used often during the day, perhaps every two or three hours, while the salve is to be used only upon retiring at night. Should much pain exist the compress and bandage will be found useful in allaying the irritation produced by the movement of the lids. Usually these ulcers yield readily to treatment and leave no opacity to mark their past presence. Sometimes when directly over the pupil they occasion considerable discomfort and dimness of vision.

When these superficial ulcers gain the advantage either from neglect on the part of the patient, or from ignorance on the part of the physician, they pass into the graver form, the deep ulcers which form

the second group of my classification. (2.) Deep ulcers of the cornea are the ulcers. These cause trouble both to the general practitioner and specialist. Deep ulcers are caused by the bursting of a phlycter on the cornea, by abrasions which penetrate the corneal substance, contused wounds, foreign bodies, etc. Deep ulcers are also seen following such diseases as small-pox, measles, etc. In paralysis of the fifth nerve we see occasionally ulceration of the cornea.

The appearance of a deep ulcer is characteristic, presenting a well-defined concavity with the edges opaque from the infiltration of the leucocytes, and in healing usually form scar tissue which is opaque and gives the typical cloud which is seen so frequently following corneal ulceration.

The symptoms of a deep ulcer are the same as those seen in a superficial ulcer but of greater severity, increased photophobia, copious and profuse lachrymation with pain more or less severe in and around the eye.

The ulcer may be large or small and may be situated about the periphery or may be over the papillary aperture and when so situated serious trouble will result as to future vision. The ulcerative process may extend so far that there is destruction of the corneal substance up to the membrane of Descemet and then we have a protrusion or hernia of the membrane which may or may not rupture and be followed by iritic hernia; this condition which I have seen not unfrequently is known as "keratocele." That which follows deep ulceration most frequently is opacity and of course varies in density and opacity with the amount of corneal substance affected by the inflammation. Omitting the treatment for a while we will pass to the next form of ulcers. (3.) Serpiginous ulcers usually occur in elderly persons and those advanced in years where the vitality of the structure is below par and especially the cornea, which shows this impairment of vitality by the "arcus senilis." This form of ulceration is mostly in a chronic form and advances slowly in a crescentic form which gradually cuts off the proper nutrition of the cornea and as a consequence sloughing, in long neglected cases followed most surely by pan-opthalmitis.

The acute symptoms of this form of ulceration are not always the most imperative and on this account the neglect is excusable on the part of the patient. The ulcer advances peripherally, destroying as it advances, and forming scar tissue in its trail.

Treatment when properly instituted and observed can check its progress and preserve the eye from its dire consequences, but the mal-nutrition of the parts as a general rule prevents any brilliant achievements.

To return now to the treatment of these ulcers of the cornea. We have at least six distinct objects to have in view in the treatment of ulcers in general be they superficial, deep or serpiginous.

1. Stimulate the ulcer to a normal and healthy condition.
2. To ease eye-pain and produce sleep when required.
3. To protect the ulcer from friction against the eyelid and from strong light.
4. To diminish intra-ocular tension when necessary.
5. To apply a seton or other counter-irritant when needed.
6. To improve the general constitution.

Taking these objects *ad seriatum*:

First.—The ulcer can be stimulated when stimulation is needed which is in chronic and indolent cases. If there is any one drug indicated in corneal troubles it is mercury in any of its various forms. The best mode of application of mercury in stimulating corneal ulcers is in the form of the yellow oxide of mercury ointment, the yellow oxide is used in preference to the red oxide because the former is less crystalline than the latter, and consequently less irritating to the eye. Calomel may be used as a powder, but it very often causes such intense pain that it must be discontinued. A very weak solution of eserine may be used with advantage in lessening the photophobia and at the same time stimulating the ulcer to renewed activity—warmth applied externally also aids materially in stimulating the ulcers.

Should these fail in stimulating sluggish ulcers into activity resort should be had to the use of the mitigated stick of silver nitrate or the galvano cautery or simply scraping the edges of the ulcer with a sharp instrument or small curette. Caution need hardly be enjoined upon any one using such severe means, and caution should be especially exercised in using the

cautery, for puncture of the cornea is not an infrequent sequence of such means.

SECOND.—To ease pain and produce sleep if necessary. The use of hot fomentations and warm compresses, the use of the Japanese hot box, warm applications of a solution of poppy-head tea, subcutaneous injections of morphia in the temporal and orbital regions give relief temporarily, the use of a solution of atropine in the eye also aids wonderfully in relieving pain.

THIRD.—To lessen the irritation caused by friction of the lids upon the inflamed and ulcerated part.

A large shade should be worn to protect the eye from light and thus alleviate the pain consequent upon such exposure. If this should fail then the eye should be bandaged up with a slight compress to hold the lids in position and prevent motion.

FOURTH.—To diminish intra-ocular pressure when necessary. This is indicated occasionally in deep ulcers when hernia of the iris and rupture of the membrane of Descemet, is only a matter of a short time anyhow. We can diminish intra-ocular pressure by the use of eserine which not only lessens intra-ocular pressure but stimulates the ulcer; in cases of hypopyon the use of eserine often acts very quickly. The second and sure method of diminishing intra-ocular pressure is by parcentesis of the anterior chamber, hernia of the iris and wounding of the lens is to be particularly avoided; should the hernia of the iris persist, iridectomy should be performed while the wound is open. In some cases the ordinary paracentesis is less preferable to Saemisch's operation which consists in passing an ordinary long Graefe cataract knife through the ulcer and the anterior chamber, to as great a length as the surrounding infiltration exists. Every twenty-four hours the wound should be opened so as to allow the escape of purulent matter from the anterior chamber and should be so opened until suppuration diminishes.

FIFTH.—Counter irritation is an extremely valuable adjunct in the practice of ophthalmology and I have seen the seton in the temple clear up a cornea that seemed so cloudy and vascular as to almost dishearten one of its ever regaining its transparency. I have in mind now distinctly two such cases of recent occurrence. The best seton is horse hair or stout thread, and can be inserted in the temple or in the nape of the neck and should remain for at least two weeks after the disappearance of all ulceration. Blisters can also be used though with less efficacy. Artificial leeching can also be used advantageously.

SIXTH.—In reference to the improvment of the general health of the patient I need say very little. Good food plenty of out-door exercise, hygienic surroundings, tonics, iron, quinine, strychnia, cod-liver oil, phosphorus, etc., such remedies as the nature of the case may demand. I have already taken up more of your time than I expected and will hasten to enumerate some of the sequelæ of ulcer of the cornea.

Perhaps the nost common sequel of corneal ulceration is opacity. If the opacity is dense and large nothing can be done for it other than making an artificial pupil if any clear cornea exists and if none exists then tattooing the cornea for cosmetic effect can be done. Should the cloud be small and not very dense, the continued use of calomel powder for a long time will clear the cornea but this can only be done in very pale opacities, and used for a long time. Keratocele is another sequel of deep ulcer of the cornea and may be followed by hernia of the iris or in the case of small children, especially in the ulceration of ophthalmia neonatorum, pyramidal cataracts may form from the contact of the lens with the ulcerated cornea. I cannot take your time to so describe all these changes and the treatment of the same, but must confine myself to the subject matter. Astigmatism may follow a corneal ulcer and the contour of the cornea may be changed as to make it very difficult to help by means of glasses.

Staphaloma anterior may follow from severe ulceration of the cornea when the eye is hopelessly lost. Hypopyon is seen very often following corneal ulcers, followed by iritis in some few cases, and sometimes by panophthalmitis. When such is the dire results of corneal ulcers little or no hope can be entertained for the restoration of the eye to its normal condition.

Summary: Corneal ulcers are to be treated by the use of mercurial ointment in connection with a weak solution of corrosive chloride of mercury. When sluggish and chronic the ulcer is to be stimulated by the various methods enumerated and remembering that in the vast majority of the cases the sequelæ are to be accounted for by some neglect either on the part of the patient or doctor; also that opacities the sooner seen the sooner helped.

327 N. Charles St., Baltimore, Md.

Communications.

GONORRHŒAL ARTHRITIS.

By PROFESSOR CHARLES CAREY, M. D.,
BUFFALO GENERAL HOSPITAL.

This patient was well till four years ago when he had inflammation of the bowels, from which he made a good recovery. Neither his occupation, that of a candy maker, his family history, nor his previous personal history—so far as it can be elicited—has any bearing on his present trouble. Two weeks ago he entered the hospital in a bad condition. His shoulders and hips had been swollen for a week and others joints became involved. His knees were enormously distended and too tender to admit of any manipulation. They were at least twice their present size and the diminution will undoubtedly continue. The disease has shown no tendency to fly rapidly from one joint to another, but rather to linger where it has once invaded. On making pressure on the patella, I can bring it with a click against the femur, showing that the swelling is beneath the patella and floating it forward. The sense of fluctuation, also, is distinct Both knees are affected and nearly equally. The ankles have been involved and on the dorsum of the hand there was a swelling running along the line of the tendon sheathes. The wrists are still a little sore. The patient cannot extend the arm at the shoulder but I can extend it for him without causing him pain. This implies that the trouble is in the tendon sheathes or bursæ lying between the muscles and not in the joint itself. I have seen similar cases in which the malady was limited entirely to the different bursæ, as the one beneath the tendo patellæ or at the point where the tendo Achillis rounds the heel. In other patients, a touch on the tip of the elbow would be very painful on account of the location of the bursa there. The urine is normal, in this case, except for the presence of a small amount of pus. There has been a urethral discharge which, the patient says, he did not notice until he entered the hospital. Venereal history is denied.

This is an illustration of a disease which is, fortunately, quite rare. It is a gonorrhœal infection of joints. When this boy of 20 entered the hospital, I was inclined to discredit his statement that he had not known of the presence of a urethritis for the discharge looked to me as if it had existed for some time. It had been present so long that it had involved the tissues outside the urethral canal in a prosthitis and a balanitis and the thickening was so great that the under surface of the inflamed prepuce and glans penis seemed, at first sight, to be covered with chancroidal sores. This external inflammation was, therefore, purely accidental and if the man had been careful and cleanly in his habits, it certainly would not have occurred. His own tendency to distribute the disease was also manifested by the fact that he had a bilateral gonorrhœal conjunctivitis, particularly marked in the right eye but not of severe grade in either. The right conjunctiva is still engorged and reddened but there is little purulent discharge. The very fact that this inflammation has not been more destructive leads me to believe that this man's gonorrhœa was old and had, in a measure, lost its virulence before he accidently inoculated his eyes. There is no type of conjunctivitis which compares in gravity with the acute gonorrhœal form for the sight is sometimes utterly destroyed within twenty-four hours after the first inoculation.

It was no trouble to stop the balanoprosthitis and the urethritis. The inflammation of the glans and prepuce subsided in a very hours and had entirely disappeared in the course of two days under the simple treatment of frequent irrigation and cleanliness aided by powdering iodoform between the glans and the foreskin. The epithelium of those parts tends to recover its normal condition for it is not nearly so sensitive as that of the urethral mucous membrane. Sometimes, on account of the thickening of the foreskin, if retracted beyond the glans, it will remain in the condition of paraphimosis and you must guard against adding this to the complications already existing.

I wish to call your attention particularly to the articular inflammation. This has been considered to be purely rheumatic but it is not so, for patients without any tendency to rheumatism will develop this arthritis almost immediately after contracting gonorrhœa. This patient has never had anything suggestive of rheumatism except that last winter he suffered occa-

sionally in the morning from a slight pain in the left knee. It has been observed that men after recovery from an attack of gonorrhœal arthritis will have a second attack precipitated by a subsequent urethritis. Furthermore, the frequency with which bursal and tendon sheaths are involved in arthritis following gonorrhœa, the relative absence of pain, the lack of sudden metastases, the comparatively low temperature—this patient's highest temperature has been only 102° in spite of the enormous swelling of the joints and finally the reluctance with which this trouble yields to treatment, established its claim to be ranked as a distinct form of joint affection. You need not be surprised if your patients become weary of your attempts at curing them and after you have seen two or three cases of gonorrhœal rheumatism, you will dread to see one enter your office again.

We may get a hint as to the pathology of this form of joint trouble by referring to a similar arthritis which sometimes follows scarlet-fever. It is not so very uncommon either, for articular inflammations to come along in connection with some others of the higher grade of infectious maladies. Such troubles, therefore, are rather analogous to pyæmic metastasis to joints although it is very rarely that the synovial inflammations assume a purulent form.

This man has not only had the synovial membranes affected of both knees, ankles, shoulders and many tendons but he has also had an endocarditis. This is, comparatively speaking, not an uncommon sequela of scarlatina but it is very rare to find such an illustration of the analogy to true rheumatism in gonorrhœal arthritis. When this patient entered the hospital he had quite a roughened first heart sound amounting to a murmur but, though still present, I am glad to say that it is diminished in intensity. This points to the fact that the structures in the heart which are analogous to the fibrous structures of joints are involved also.

What is the treatment to be carried out in these cases? The first step is to cure the urethral discharge and thus remove the source of the virus. This having been accomplished, you will find that the arthritic trouble is one of the most lingering and annoying, involving one joint after another in spite of the most careful observance of hygienic principles and of tonic and sustaining treatment. Although the disease is not absolutely incurable, it lasts till both yourself and the patient are tired of the treatment. Ricard, a venereal specialist who is much quoted to-day, said that he believed the infernal regions for doctors would be full of just such annoying cases. If these patients have a recurrence of the gonorrhœa—as such men are apt to have—the joint trouble is lighted up again and intensified. Another unfavorable circumstance is that these men do not want to acknowledge their trouble, they are not, as a rule, as sick as this patient has been and they are not compelled to give up, but they continue to walk about though lame; they become weak and anæmic but they keep going, this is one of the principal reasons for the chronicity of the malady. The chances of success are better if you can begin the treatment early and keep the patient in bed. Splinting the joints affected, secures local rest and some even recommend a plaster-of-Paris bandage, which is rather inconvenient and quite unnecessary. Although it is sometimes necessary to confine the limb in a fixed position, slightly flexed, it would have been impossible to do so in this case on account of the multiplicity of joints involved. The patient, however, has been lying quietly in bed and the inflammation has subsided rapidly.

If the disease is limited to a single articulation or to a few, mercurials may be applied locally. You will find slight use for alkaline salts except to secure one or two evacuations of the bowels daily, and for this purpose Rochelle salts may be employed. Salol will give as good results as any drug. This man was placed upon salol immediately after his admission to the hospital, being given two grains three times daily—rather small dosage. Recently we have also given him iron on account of his anæmia. Up to the present, the case has gone on very well and the degree of absorption from the knees is surprising. A latent lameness will, however, probably follow his recovery. In my opinion this is the worst of all the forms of venereal disease and I would rather see any one in whom I am interested, affected with several of the others than with this. The tendency manifested in this disease is liable to be seen in the symptoms of puru-

lent absorption from abscesses or ulcers wherever located and whenever pus may subsequently be formed. Women are not particularly subject to this disease because the mucous membrane of the vagina is not favorable to the absorption of the gonorrhœal virus and because the female urethra is much shorter than the male and lined with far less sensitive epithelium. The male urethra, too, has pockets well adapted to retaining for long periods the gonorrhœal disease. Even in men, however, gonorrhœal arthritis is not a common disease.

A CAUSE OF PROSTATITIS.

By J. W. IRWIN, M. D.,
LOUISVILLE, KY.

I do not intend to speak of the general causes of this disease; my remarks will only apply to prostatitis following bicycle riding.

Within the last eighteen months five cases of prostatitis have come to my notice, which could be traced directly to the pressure on the prostate gland by the saddle of the bicycle. Four of the subjects have passed the years of middle life, and one is in his teens. In all cases the phenomena presented by them were very similar in character, and a general description of the cases, will, I hope, suffice.

After riding the bicycle for a few hours, during the act of micturition a feeling as though the vesicle end of the urethra was raw, was experienced; then a full feeling behind the scrotum came on which was unattended by pain. Inordinate and persistent erections of the penis, coming on at short intervals and lasting three or four days was the most unpleasant feature observed.

The urethra during the act of micturition felt raw and tender under pressure; weight and some dull pain, was felt in the testicles. There was no discharge from the penis at first, but after two or three days a little moisture was observed coming from the meatus urinarius. The discharge seemed to be very thin and colorless. The desire to void the urine more frequently than normal was present while the trouble lasted.

The treatment advised was saline laxatives, and the free use of water internally. For the relief of troublesome erections of the penis, mono-bromide of camphor in large doses was advised. This course of treatment together with the removal of the cause, gave relief in from five to seven days.

In presenting this report for your consideration, I do so believing that others have observed similar phenomena following the use of the wheel-horse.

When time, which regulates the fashion of the hour, has been consulted, who knows but one of the most annoying troubles which the male subject has to bear, may be brought on prematurely by pressure of the bicycle saddle on the prostate gland? Certainly urethritis extending into the bladder has resulted from its use in the cases reported.

TREATMENT OF DIPHTHERIA.

By JAMES E. PRYOR, M. D.,
OCEAN CITY, N. J.

There are so many drugs employed in the treatment of this disease and so many opinions regarding it that the physician is often at loss to know just what course to pursue. Without going into the pathology and diagnosis of diphtheria I shall briefly give an outline of a plan of treatment, which I have found most rational and efficient. On discovery of a severe sore throat without waiting to make any fancy distinctions, I order a purge of calomel, from five to fifteen grains, to be repeated, if need be, until the stools are green. A good adjuvant is castor oil, containing twenty to thirty drops of turpentine. This active purgation, should not be repeated, as it does all the good it can do the first time. If it turns out that you have only a case of common sore throat no harm has been done. I treat all cases of sore throat exactly as I do diphtheria and have never regretted it.

After free purgation, I order the throat sprayed every half hour at first, with a solution of hypochlorous acid, made thus.

℞ Potasss chlorat ..... ʒ i
Acid muriat..... c. p.
Mix. Let stand 2 minutes then add
Aquæ Destillat..... ʒ vi
Mix. Sig. Spray:

If a gargle is desired, the same is used, diluted with an equal quantity of water.

Medicinally, I believe in, and have had best results in using tincture of iron in doses of ten to thirty drops every two hours, also one to two grains of quinine every three or four hours, with a milk diet, which on the whole, I think is the best, yet the patient may be allowed to drink strong lemonade, coffee, orange juice, or pineapple juice. The latter is said to contain a digestive ferment which attacks the membrane, this may or may not be true; but it certainly does no harm.

Locally, I order the throat enveloped in several layers of flannel, saturated with lard and turpentine, to be kept on. I strongly condemn the use of poultices, which so many are apt to apply, especially anxious friends.

Rather apply cold, as ice retards the growth of the bacilli. Heat favors them. Again, never give the patient a solution of chlorate of potash to drink. It is death to the kidneys.

I have found peroxide of hydrogen useful, especially when the disease invades the nasal passages. I have had excellent results from its use, under these circumstances, but have not much confidence in it as the main part of the treatment.

Whiskey and brandy should be reserved for the struggle, when the blood poisoning attacks the heart. It should then be used boldly and unsparingly.

Inasmuch as the membrane is a great source of danger by impeding respiration. We should always hold ourselves in readiness to perform tracheotomy.

We should not allowours e diphtheria and be deceived by favorable symptoms. The danger-line is very broad and extends far over into convalescence. Do not allow the patient to make any exertion that can possibly be avoided as the heart sometimes lets go all holds when the patient is to all appearances quite out of danger.

Right here let me say: Don't for any reason use antipyrin, acetanilid, phenacetin, or any other depressing drug. Save and cultivate every ounce of the patient's strength. If such drugs are used, you may as well hunt up the nearest undertaker.

I have said nothing about the hygienic surroundings and necessity for isolation of patient, taking it for granted that every physician is fully conversant with the fact.

MEDICAL LEGISLATION.*

By S. C. TOWLER, M.D.,
MARIONVILLE, PA.

The State Medical Society, has placed itself squarely, and earnestly in favor of a State Board of Medical Examiners, for Practitioners of Medicine, etc. It is pertinent, at this point. to inform laymen, and some doctors, what the State Medical Society is. It is the representative body, directly of,in round numbers,2500 doctors, composing the county societies, and indirectly, of 6000 regular physicians, in this State. Within its membership are found, the most eminent medical men of the Commonwealth, men of national reputation, and second to none in their profession. The State Society has been noted and indeed blamed, for its conservatism. It has been slow to move out of well-beaten paths, slow to give countenance to theories, doctrines or legislation, unless well-founded, proved and necessary. It does not lend its aid, or give its support to any man, or set of men, but has with dignity stood for the profession as a whole, regardless of faction. No man, be he ever so eminent, who appears before it, with theory or line of treatment, is above its kindly criticism, no man, in its ranks, so humble, but his ideas can have place, and respectful hearing. When such an organization places itself on record, in favor of an examining board, it means more than "something;" it means much. It seems that this learned and conservative body has been forced to the conclusion that the present law is not sufficient to protect the layman from incompetent and ignorant practitioners. When we consider, that, under the law of 1881, no person in 1892 can enter into and begin the practice of medicine without a diploma from a legally chartered college, the innovation must be startling to the uninitiated. For it means, not only as stated above, but also, that in the profession itself, diplomas are at a discount.

What a criticism on the profession! What a sarcasm on medical colleges! "What?" asks the layman, "Is the sacred sheepskin, that hangs in my family doctor's office, with all its glory of ribbon, and seal, and long list of professors' names, not evidence of his fitness for his profession." The State Society by its attitude answers,

*Read before the Butler County Medical Society.

"We do not know the merits of your particular doctor, nor do we condemn his diploma, but we do know, that as a rule diplomas are not sufficient evidence of medical education, nor a safe thing for a layman to tie to, and we cannot ask for a law that discriminates between colleges." All well-posted physicians know why the State Society has been forced into this position. It is because so many medical colleges, bid for students, by easy matriculation and graduation. It is merely a question of obtaining fees, in colleges of this class, not of turning out first-class workmen.

In spite of our democracy and republican form of government, Americans have a passion for titles. We have more Generals, Colonels, Majors and Captains, more Judges and Esquires, more Reverends and Doctors, and less plain Misters, I think, than any nation on earth. In this array of American titular gentlemen, "the Doctor," stands high, very high socially. In Great Britain and Europe, the physician stands about on a par with the tradesman, seldom among the gentry. Here there is no assembly, amongst high or low, to which "the Doctor" is not a welcome and invited guest. It is no wonder then, that the aspiring American seeks admission to its ranks, and in the seeking, in too many instances, the notoriety is what is aimed at, its almost divine mission, made a secondary consideration if indeed considered at all. The aim being selfish, it follows, that the aspirant seeks the mode most easy of access, and finds it in the college, that is willing to sell its honor and its name, for a price, regardless of consequences to society or the great wrong to a noble profession.

To this class of medical men, "the graveyard" is a joke, "buried his mistake" is funny, and "Who has been butchered now?" the essence of wit. Did the layman know the danger he is in, the narrow escape his children have made, aye, the pit of death into which his loved ones have fallen, through the ignorance of incompetent practitioners, he would not laugh at the doctor's mistakes, but would shudder in horror at the slaughter. Do I exaggerate? You who surround me to-day know I do not.

In this County of Butler I stood by the body of a woman, and as the post-mortem progressed, men turned pale, as that worthy surgeon, Dr. R. S. Wallace, exclaimed, "The scoundrel who did that ought to be hung." There before us, was a wound, from vagina to abdominal cavity, through which the hand could be thrust, telling an awful story, of shock, hæmorrhage and death. The practitioner who made that wound, had been trying to force a pair of placental forceps into the os uteri, and had madly and ignorantly pushed the instrument through the cul-de-sac above. He was not hung, indeed I believe he is practicing (?) yet.

My attention was called not so long ago to a case of severe aud protracted postpartum hæmorrhage accompanied by convulsions. The graduate in Medicine who was called, saw the stream of blood, so great that it soaked through the mattress, and trickled across the floor, he saw the clenched hand, and set teeth of the unconscious patient; and he remembered that somewhere he had read or heard of venesection in puerperal convulsions, and regardless of circumstances or condition, he opened a vein in the arm. Of course, death ended the scene, and yet the young husband, in relating the circumstances to me, said, "I suppose that all was done that could be done to save her life." It is not necessary for me to multiply cases, or enlarge on this point, cases more or less similar are familiar to you, to say nothing of the absurdly ignorant answers given by graduates of medicine before U. S. and State examining boards. It is a sad but important fact to note, that 20 per cent. of graduates are rejected by State Boards and 68 per cent. by the U. S. examining boards. Such results are a disgrace to the profession, and the issuing of diplomas to that class of graduates is dangerous to the community at large, and a direct blow and injury to the honest practitioner and student who has worked hard to earn his well merited degree. Besides this class, there are those who hold fraudulent diplomas of crank schools. I have here with me a copy taken from the records of Forest County, of a diploma of the "American Health College" of Cincinnati, O., legally chartered in 1874. This precious (?) document, not only constitutes the holder, a "Doctor of Medicine" according to the Vitapathic system, (whatever that may mean) but constitutes him a minister. It authorizes him to preach, solemnize marriage and attend funerals,

etc., etc. There are people, and not a few in number, who think that such a blanket diploma as that, "is great medicine."

All this is more than sufficient reason why the State Society has taken the stand it has for additional legislation. The form of bill as introduced in the Senate, and so ably advocated by our distinguished fellow member, Senator Showalter, is the style of bill approved by the State Society. This bill was so fair and honest, so just to all concerned, so free from sectarian bias, and so liberal in all its provisions, that no just reason has ever been given for either its amendment or mutilation in the House. The bill left the selection of members of the board to the common sense judgment of the Governor, and Senate. It asked for no favors for regulars, nor demanded discrimination against Homeopaths or Eclectics. It interfered with no existing practitioner who was legally registered under the Act of 1881. It simply threw a wall of protection about the future, and asked that the practitioner should be what he claimed to be, "competent to practice his profession," and nothing more. Could anything be more reasonable, should anything less be asked?

The objections to this bill came from various sources. First in order was that from the sectarians, *i. e.*, the Homeopaths and Eclectics. They demanded that they should be recognized on the Board. There was nothing in the bill to prevent their recognition, so the demand was a special plea for class legislation. Seemingly fearful that they might be ignored by the Governor in the appointments, they demanded that this recognition should be compulsory. What a position for medical men to take. The advocates of these schools appeared before the Committee of the House having the bill in charge, and boldly claimed the glory of all the advancement in medicine, and all the discoveries of modern therapeutics. Yet they sank themselves so low, as to seek to compel by legal enactment, the recognition they were fearful their boasted professional triumphs, would not accord them. In short they were afraid to stand on their merits alone. If any think this severe, let me remind them, that after the amendment of the bill, by placing (most unjustly) three Homeopaths, three Eclectics and three Regulars on the board; thus giving 1075 Homeopaths and Eclectics, six representatives, and 6240 Regular physicians only three representatives, that even then with all this advantage, the advocates of these schools, appeared on the floor of the House and lobbied against the bill. So their real position was against any examining board whatever, but if one must be had then compulsory recognition of their schools. I say again, that the situation proves, that they were not willing to stand on merit alone, nor subject their graduates to the same test applied to the regular. Let me here note that the word "Regular" is used only for distinction from the sectarian. The "Regular" is simply a physician. He claims no dogmatic distinction, is bound by no iron-clad theory, but is free to choose his remedy when and whence he will. Some of our own people do not seem to known that the appellation of "Allopathist" was an invention of Hahnemann, the Apostle of Homeopathy.

It may be argued that the sectarian physicians fought the examiners' bill in the interests of their own bill, known as the "Medical Educational Bill." Their position won't stand examination on that either. The Medical Educational Bill was referred in the House to the Committee of "Health and Sanitation." Of those members composing that committee ten were regular physicians, yet they gave the sectarians most respectful hearing and reported the bill promptly "as committed." It was in the power of these ten regulars to have juggled with, or even killed that bill in committee. On the contrary, these ten regulars, of whom I was one, assured the sectarian gentlemen, that the bill should have a fair show and open discussion in the House. It was read a first time and then its friends let it quietly drop. The entire history of Medical Legislation in the last session, shows on the part of the regulars, open and above board desire for discussion of these bills on their merits, and on the part of the sectarian, simply flat-footed opposition. The opposition in our own (Regular) ranks, was largely uncalled for. The principal objection was, that the professors in our colleges should be the most competent judges of the qualifications of the graduates, and the degree given should be sufficient evidence of ability. The answer is, no one questions that they should be, but the bald fact remains that they don't examine and there is no process to compel them to except in the legislation proposed.

If ignoramuses were not turned out by colleges, as graduates, then the State Society would never have asked for the legislation. Again, it was objected, "that midwives could still practice," Every country physician knows, that it would be a great wrong and hardship to the suffering woman in labor, to forbid the attention of another woman, when the nearest and perhaps only doctor lived miles away. Let it be remembered also, that a woman in confinement, is just as safe in the hands of a woman, who has had children and thus some practical experience, as she would be in the hands of that "Graduate," who answered that "the best way to facilitate the expulsion of the placenta, was to let the woman get up and walk about the house five minutes after the delivery." The fact is the scope and intention of the bill is not properly understood. It is not the neighbor who assists a wounded or sick man in an emergency; it is not the woman, assisting her sister woman in her pain and anguish; it is not the painstaking and honest practitioner even though he be somewhat behind the times, that the State Society is after, not at all. It is the man who claims to be, *what he is not*, the man whose qualifications for practice are simply on paper and nowhere else. The man who is dangerous, incompetent and unworthy, and yet who flaunts his diploma in the face of worthy practitioners and a confiding community, saying, "this is my authority, what are you going to do about it?" I have in my possession, specimen copies of the examination sheets for graduates asking admission to the Army and Navy. They cover the nine common branches, taught in our colleges, with an average of eight questions in each branch; with few exceptions the questions are plain and practical, yet sixty-eight per cent. of graduates fail to pass. If the diploma was sufficient evidence of qualification, the Army and Navy Board would not require the additional examination.

It is pertinent to here remark that the life of the civilian is just as valuable as that of the military, and as much to be protected. It is well to remind those in our own ranks, members of county societies, who opposed the bill, that their position is hardly fair to the majority. In a liberal profession like ours, we can cheerfully concede that no man is compelled to accept the opinion of another. That even majorities may be wrong and minorities right. Yet every man of common sense must acknowledge that as long as he is in the organization, it is his plain duty to submit to the majority and not join with its enemies in frustrating its purposes. The only exception to this rule is when majorities have been gained by fraud and misrepresentation.

The majority of the County Medical Societies, is undoubtedly represented by the majority in the State Society, and opposition to its plans by aiding those outside the organization, is little short of treason in the camp.

Now we come to the objections raised by members of the Legislature. First; "The profession is not united in asking for this legislation." The answer is, that it is impossible to not have, in 8,000 doctors in the State, some kickers—and some of them would kick at most anything. But the bill is not for the protection of Doctors, save incidentally, but for the public, and if good legislation should pass regardless of some Doctor's opposition. This leads us to the next objection, viz., "The public has not demanded this legislation." I can't repress a smile as I answer, that, if no legislation was considered but that demanded by the public, the General Assembly could meet, transact such business, and adjourn after a four weeks session. Legislation is called for, more often by leaders of thought than by public demand. There was no public demand for the law of '81, yet so far as it goes, it has popular approval, and is a good law. There was no public demand for the Pharmaceutical Examining Board, yet it has popular approval, and its work has been good and protective of life and health. "It is perfectly safe to say that no well posted layman will object to this law, for it is for his benefit and it would meet with almost universal commendation. The next objection was, "If the diploma is not evidence of ability why should the graduate be obliged to have one at all?" That is the hardest objection of any to answer. Having taken our position on the competency of the applicant as ascertained by the board and discounted his diploma in advance, to be consistent, we are compelled to admit that if an applicant can pass the examination before his diploma is presented, he should not be

compelled to have one at all. For instance, a member said to me, "Doctor, suppose a young fellow undertook to educate himself under a preceptor; he procures his books, studies hard and becomes able to pass the examination, why should he not have the chance?" I answer, "He should, that feature of the bill can be omitted if it was at all called for without prejudice to the essential parts of the bill." It would be very rare indeed that the board would be called upon to examine such an applicant, so rare indeed that save for the consistency the objection might go unanswered. On the other hand with that feature retained it compels colleges to see that students are capable of passing the examination. It strengthens, endorses and makes good the diploma of the applicant, and is a help to him in medical standing. So that while that feature might be omitted, it is very much better to retain it. On the same line is the objection that "The members of the Board should not be compelled to have diplomas." The answer is that while it is true diplomas are not sufficient evidence, yet it is part of the evidence needed to form a Board intelligently, it being the standard up to the time of the change. To it is added the requirement of ten years practice, a feature of much practical importance. It is to be remembered that the Governor is expected and would doubtless make careful inquiries before making appointments to the Board.

That brings us to another objection, that this ten year feature cuts out the younger graduates from appointment. Well! brethren there will be left more than 7550 to condole with you and it's hardly worth while kicking over a little matter like that. Another objection is, "That it will hurt the smaller colleges." I fail to see why. Every college professes to send out its students as "competent doctors." That is all this bill requires them to do. High or low, great or small, rich or poor, in person or college all this bill asks to know is this "Is he qualified?"

In order to effect this legislation, it is necessary that the profession be in accord and urge its enactment. It is necessary also that the public be informed of the true state of the matter. To this end not only the medical press, but the secular press as well, must be enlisted in this work. Few laymen see a medical journal and take no interest in it when they do. They can only be reached by the public press There are few papers but would be glad to have a letter on that subject from the leaders of thought in the profession. Let these leaders come boldly to the front and a revolution in sentiment will take place. The quack and charlatan use the public press, while the worthy men of the profession write an article on humbugs for a medical journal and then sit down and growl at the growing influence of the pretender. To educate the people, to show them "what they are at" we must use the means best adapted to that end and not travel only in paths they never follow.

I have gone into this subject somewhat exhaustively, for this society has not only the honor of having the only member of Senate or House, in the person of Dr. Showalter, who has succeeded in pushing such a bill through the body of which he was a member, but the State Society Legislative Committee has placed two of our members as its associates, viz., Dr. A. Lusk and myself, so it behooves us to keep up the society record in the good work. Finally as a means of success, bickerings and jealousies in our ranks must cease. Let us remember "whereunto we are called." Our solemn responsibilities not only as healers of diseases but educators in hygiene. For many of us, I know, the way is rough, the road hard to travel, with but here and there a flower, and there and here a resting place. Cruel injustice has wrung kindly hearts and base ingratitude has added its pang, yet he who loves his fellow man, ministering to his sufferings, is loved by his God and meets that God's reward.

A PRESCRIPTION FOR YOUNG PHYSICIANS.

According to the *British Medical Journal* a distinguished Vienna professor gives the following prescription to all young physicians who call to take leave of him before embarking on their professional career. R. Veritatis, humanitatis, fidelitatis, aa infinitum. Misce. Ft. elixir vitæ. Signa: To be used constantly throughout life. It is easy, perhaps for most men to start with a good stock of this spiritual elixir, but the difficulty is to find an apothecary who can dispense the prescription when the supply has run out.

Society Reports.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting of November 3, 1892.

The First Vice-President, Dr. W. S. Stewart, in the chair.

Dr. Joseph Hoffman presented a paper on "The Questions and Lessons of Ectopic Pregnancy."

The doctor argued that electricity and the injection of lethal substances into the sac have no place in the treatment of this alarming condition and that surgical interference is the only rational mode of dealing with it. It should be treated as all other disease is treated which involves the presence of a foreign body—remove the offending portion, the earlier the better, before complications are present, and before the growth is dangerous by its invasion of other structures. As to the let alone doctrine of Freund, and those who say with him that ectopic pregnancy is a disease that very frequently cures itself: It is not worth while to dispute this. The same may be said of almost every disease, surgical or medical. The argument applied to the affairs of a business world would be received with ridicule—they are no less ridiculous in surgery. The surgical, practical and sensible view in which to consider ectopic gestation is to cut it short as early as may be, unless the child is viable. In the latter case the treatment which is most rational is that which would save the mother.

Experience has demonstrated that rupture may recur and its recurrence kille hence to say that rupture is not always fatal, is to agree to what we all know. What we all further know is that after on; rupture, the second or third may be fatal, and that is sufficient argument not to wait for a second or indeed to wait at all. In the direct treatment of this disease we have only one indication to meet, and that is the stoppage of hæmorrhage.

The essentials of the question under consideration are; its frequent fatality not its possible benignancy, and the absolute simplicity of its treatment when early undertaken by real surgery and surgeons; its curability even when the patient is in extremis; the complications and dangers of delay in those cases that get well without interference, and the uncertainty whether or not interference may at last be not necessary. These are the essential questions and they have their answer in the axioms of positive surgery, not in the calculation of chances.

DISCUSSION.

Dr. G. Betton Massey said that he did not know how many cases of extra-uterine pregnancy he had treated by electricity as he had not taken the trouble to operate to establish the diagnosis, but he had been able to diagnose with reasonable certainty three cases so treated. The use of this conservative agent is confined to very early discoveries of extra-uterine pregnancy prior to rupture, and those cases he believed could be invariably cured by it prior to the third or fourth month.

Dr. Joseph Price believed that primarily all these cases are tubal, that they rupture; and few, if any, ever go to four months or even three months without rupture. He has never seen one or known of one. There has been nothing in his surgical experience to correspond with that of Mr. Tait or Hart and Barbour, except that with Mr. Tait, he believed that they are all tubal and all rupture; but the remainder of his experience that they go into the broad ligament and go on to term, he is not willing to accept for a moment.

Dr. Massey speaks of the use of electricity at the third or fourth month. In all the cases that Dr. Price has seen, rupture has taken place long before the third month. If Dr. Massey will read Dr. Formad's experience, he will see that in thirty-five fatal cases, none was beyond the third month. Some had gone a week over time and some two weeks and all had died suddenly, except one in West Philadelphia. There was a chance of saving one out of thirty-five.

We still hear something about so-called pelvic hæmatocele. Those cases of so-called pelvic hæmatocele present precisely the same history as the cases we are constantly operating on for tubal pregnancy and finding the fœtus and quantities of blood, and removing the fœtal sac with a great hole in it.

Dr. Joseph Hoffman said he had hoped that the phase of the treatment of the child after viability or of allowing it to go on to viability would have received at-

tention. He did not believe in it, if by any means we can discover the pregnancy early. He would as soon think of allowing a tumor to grow in a woman's breast to see whether it was going to turn out malignant or benign before removing it, as to allow ectopic pregnancy to go on if he found it early. The point in reference to electricity in these cases is the diagnosis. Dr. Price has opened many abdomens expecting to find ectopic pregnancy but did not find it even after the symptoms of rupture. Even after the stoppage of the menstrual flow for some months, the presence of a large mass to one side, hæmorrhage, apparent discharge of membranes, the diagnosis can not be made positively. He questioned the ability to make a diagnosis because so often a mistake is made even when the abdomen is opened. The question of removing these masses in the early months is one that we deal with positively from a surgical standpoint. That is the safe time. The effect of electricity, it must be confessed is problematical. The current used is the Faradic, which has little or no electrolytic power. Why such a current will cause the fœtus to be dissolved or absorbed, is a question. Again, it must be remembered that the length of time required to destroy the fœtus is usually the time during which rupture occurs. The stimulation of the galvanic current may rupture the sac.

Dr. Joseph Price read a paper on "Ventral Hernia Following Abdominal Section." The subject, he said, is one of more than usual interest to the profession. It may be laid down as an axiom that these cases require skill and promptitude in dealing with them. They are not cases for experimentation—the apprentice has no business with them. In them, very little bungling will kill. Careful, expert surgery saves about all. The predisposing causes are: 1st. Too rapid, hasty and imperfect preparation of the patient for section. The bowels should be thoroughly evacuated and accumulated fecal matter freely discharged. Rapidity in operating is of vital importance; minimizing the quantity of ether—the exciting cause of persistent nausea which puts a constant and trying strain upon the healing incision. 2nd. Neglected or delayed operations in cases of emaciated and greatly exhausted patients. Those requiring heroic operations are most unfavorable without careful preparation and they are of the class where there is no time for preparation. They are difficult subjects for recovery, healthy union, consolidation and organization in the incision. Well placed dry dressing and a comfortably tight bandage on a dry wound will give about perfect results. Wounds uniting by first intention throughout, are rarely followed by hernia. Stitches placed too tight and too far apart should be avoided as favoring stitch hole suppuration. Multiple suturing of incision with imperfect material strongly predisposes te hernia. Nausea, too early feeding, restlessness and too much latitude to nurse and patient are also predisposing causes. Scrupulous cleanliness and the avoidance of irritating solutions are of paramount importance in all surgery, general and abdominal. There should always be the shortest possible incision, and least possible manipulation. But one set of hands—those clean—in contact with the wound. A thorough use of the douche and well placed small glass drain, vertical, never oblique, followed by perfect co-aptation of all divided structures by not less than three sutures to the inch.

The closing of a ventral hernia is interesting and instructive. It is not a simple operation but an important surgical procedure. The opening or removal of the sac is complicated by bowel and omental adhesions—all sequelæ of an imperfect operation. Many of these secondary operations are done for two purposes; 1st to cure the hernia, 2nd to free all adhesions—to relieve the patient from the pain due to anchored viscera and the risks of bowel obstruction, not uncommon in the presence of such adhesions.

DISCUSSION.

Dr. Charles P. Noble agreed with Dr. Price in regard to preparation for operation. He keeps the patient on her back for two weeks after the operation and thinks the practice of allowing her to roll about is a bad one; in the first place because the patient is more uncomfortable, and in the second place because the movement favors hernia. He did not agree with Dr. Price as to the method of suturing. Instead of passing the sutures

entirely through, he pushes the skin with the underlying connective tissue back and inserts the needle in the aponeurosis and passes it through the recti muscles and peritoneum. When tied it is a buried suture. In an incision two inches in length there would be five or six buried silk-worm gut sutures. By this method of suturing you can see that the edges of the aponeurosis are brought together, which makes stronger union. Like Dr. Price he had not been favorable to catgut and uses it but little. The longer patients stay in bed the better. He followed the rule of allowing them to get up in three weeks and thought, with the buried suture, that that was long enough.

In regard to operations upon hernia, the operation described by Dr. Price is undoubtedly a good one, otherwise it would not have given the good results that it has done. He thought the peritoneum should be divided and dissected loose from the muscles, the entire face of the muscles should be made raw, the edge of the aponeurosis dissected out for the length of the incision and the skin freed from the aponeuroses. The sac must be dissected out as Dr. Price described and the intraperitoneal treatment must be followed out as he directed. Having done that, he thought that it is better to sew up the peritoneum with a running catgut suture and put buried sutures of silk-worm gut through the aponeurosis of the recti.

Dr. G. Betton Massey said that this discussion emphasizes what he had so frequently said, that physicians should carefully consider the question of abdominal section, instead of entering into it blindly. Again, he would ask why Dr. Price does not apply the same methods to the original operation that are so successful in preventing the recurrence of the hernia.

Dr. John S. Miller had done this operation twice. After opening the abdomen, he felt for the margin of the recti muscles. After dissecting out the peritoneum, he incised the edge of the rectus muscle and threw the sheath back and did the same on the other side. All the through and through sutures were then inserted, and while an assistant brought the parts together, he stitched the peritoneum with a continuous catgut suture. Then with interrupted sutures of catgut, he brought together the two muscles, taking in the posterior sheath. The wound was then closed. So far the result has been good.

Dr. Joseph Hoffman said that if silk-worm gut can be left in permanently in an incision, and with any advantage, he did not see why we should not leave silver wire—the one is just as unabsorbable as the other. In several instances he had seen silk-worm gut accidently left in, but it has always a foreign body, not causing suppuration, but working its way out, as a tack or a pin or a bullet might do. He did not criticise the method described, but only questioned the advisability of leaving a number of sutures under the skin with knots like those of silk-worm gut. They become hard and unyielding and how they can remain under the skin without producing discomfort is a question to him.

In regard to the location of the incision, it has always seemed to him, apart from the matter of convenience, that those incisions where we have to go outside of the linea alba into the muscle, have been less likely to lead to hernia. When such an incision is closed, we have not simply fascia or aponeurosis, which do not unite very readily, making the union, but muscle itself; so that he was not sure but what cutting to one side, into the muscle itself, may not be the reason why hernia does not occur when the abdomen is closed carefully.

So far as the occurrence of hernia is concerned, it must happen in the practice of all, especially if patients are allowed to get up too soon, and especially, he believed, in fat women, for in fat women you have large quantities of omentum which gravitates into this region and the fat of women seems to be opposed to muscular tension. While he had no doubt that many will question the truth of this proposition, he thought the truth remains that in slender women we are less apt to have hernia than in the obese.

Dr. George I. McKelway did not think that Dr. Hoffman's comparison of a silk-worm gut suture, anchored to the aponeurosis, to a pin or a bullet is a fair one. In the one case the material is anchored, while in the other it is loose and the motion of the individual moves it so it sets up irritation and finds its way to the surface. As to the suggestion of cutting through the muscle, if we thought for a moment we should remember that the fibres of the recti muscles run in the wrong

direction for us to have any added strength from an incision made in the line of the muscular fibres. We all know how easy it is, after reaching the muscle, to separate the fibres with the finger or the handle of the scalpel. There seems to be little cohesion. He did not see how their healing will result in stronger union than before.

Dr. Joseph Price said that the observations of the older ovariotomists verify the point made by Dr. Hoffman that no harm comes from splitting the recti muscles, and a number have gone on record with the observation that it does no harm and that union is usually stronger and better. Dr. Price aims at the white line but has repeatedly noticed that, where he has taken the opposite side and cut through the muscle, that no mischief has come and union is always complete, solid and perfect. These buried sutures do but little good, once the incision has united. They are loose in their entire circuit and do not act as splints. They will behave badly in time. Not only will cases come back with suture abscesses and not only will it be important to remove the sutures, but hernia will occur as often, in these cases, as where the sutures are removed.

Dr. Miller's operation is a perfect one but it takes too much time. The through and through suture will do the same thing as the terraced suture. The approximation is just as perfect. The overlapping and dove-tailing of aponeurosis is valuable. No harm comes of it. Aiming at a perfect coaptation of these two thin lines of divided aponeurosis is folly and avails nothing. He would rather have them overlap an inch than to be just in juxtaposition. Rest on the back is of vital importance. It is comfortable to the operator and also to the nurse as well as the patient. If you roll the patient as counselled by Greg Smith, and others, and allow her a little liberty, she will give you and the nurse great annoyance and anxiety.

Dr. Horace Fox presented a paper on "Some Obstetrical Experiences in the 'Slums.'"

The doctor stated that the most troublesome patients he had to deal with are the Russian Jews and it requires about twice or thrice as much work to bring such a case to a successful termination as any other class he has had occasion to treat. During his three years of service in connection with the Philadelphia Dispensary he had attended some hundreds of obstetrical cases, included septicæmia [infected before he took charge], eclampsia, peritonitis, hydatiform mole of uterus, erysipelas, and other affections, complicating the puerperal state, besides having used the forceps, performed version and craniotomy. The results have been good, he having lost but three cases. The first was a case of eclampsia of nephritic origin in her second pregnancy, having had almost fatal eclampsia in her previous confinement ten years before. The second was a case of pleuro-pneumonia in which he was not called to see the patient until she was moribund. The third was a case of heat exhaustion, occurring within eighteen hours after delivery and caused by excessive beer drinking.

The septicæmia cases can be saved by untiring attention to the patient even in surroundings which are filthy and totally unhygienic. The cause in two cases was decomposition of retained portions of the placenta; in the other, criminal negligence on the part of the graduate in attendance since he had not even washed his hands with soap and water. One case of eclampsia was epileptiform in character, the patient having had fits ever since she could remember. The doctor attended her in her third confinement and learned that she had had a convulsion in her first labor but none in the second. The fit occurred in the second stage, when the head was low down in the inferior strait and close to the perineum. The forceps were applied immediately on the stoppage of the convulsion. No other fit occurred during his attendance. The hydatiform mole is of comparatively rare occurrence.

The doctor stated that he met about a hundred physicians and students yearly in connection with his work and he is surprised at the lack of the fundimental principles of obstetrics that they manifest. He would urge necessity of earlier and better training and that the student be given more plain theoretical and practical work in obstetrics. Let him be more thoroughly quizzed, not only in the theory, but also in the practical work. Let him be disciplined in detecting, on the manikin, presentation and positions as they commonly occur, and urged to read and study

good standand works and not compends, etc.

DISCUSSION.

Dr. Joseph Price said that there had never been a premium upon skilled obstetrics. At one time it was done by vulgar, ignorant midwives and, in this city, out of 20,000 labors, 5,000 are reported by midwives. There are from 120 to 130 midwives practicing in this city. No woman should be attended by a midwife unless she bears a diploma from a good midwifery school where the theoretical and practical training is carried out as in Germany. We have no such school in this country. We have all felt the importance of early teaching and practical training of the student for practical work. Obstetrical instruction, unfortunately, begins with the second year and in some schools the student, for examination purposes, shirks obstetrics even in the second term, hoping to pass on every thing else, and thinking that he will have ample time to make it up in the last year. So much is this the case that Dr. Price thought that obstetrics ought to be taught during the first and second years, as this is one of the branches in which early practice can be had. More than half of the students do not own a classical work on obstetrics; they are living on compends and notes.

Dr. William S. Stewart presented a case of twin pregnancy of unusual interest.

Superfœtation in a bifid uterus was the anomaly he had the honor of reporting to the society. The patient was a primipara presenting no special symptoms during gestation. At the preliminary examination only one heart sound was audible. She was delivered after a long and difficult abor of an enormous child. On examining the abdomen with the intention of removing the placenta a hard resisting body was found in the right upper corner of the uterus which proved to be another, undeveloped, fœtus. The membranes were ruptured and the fœtus delivered. It proved to be an immature living fœtus of from six to seven months gestation. The child is still alive, nearly two months old.

DISCUSSION.

Dr. Joseph Price has seen several cases though not exactly like the one reported. In one case the woman was delivered of three children, the last quite macerated and dead for at least a month. Dr. Price afterwards got the history of a fall down stairs at the eighth month with quite free bleeding, and thought the child was killed at that time.

Dr. W. S. Stewart regretted that he ruptured the partition and did not let the second child go to full term. The lesson to be learned is not to be in a hurry to deliver where you find that the placenta is separate and the child is occupying a separate compartment of the uterus.

Elliston J. Morris, M. D.
Secretary.

MEDICO-CHIRURGICAL SOCIETY, OF LOUISVILLE.

Stated Meeting of October 14th, 1892.

Dr. F. C Simpson, President, in the Chair.

Dr. C. Skinner: I exhibit here a leg removed from a man seventy-two years of age, because of sarcoma. The man gives the history of having a fall during the month of February, 1892, spraining his knee. You will notice I made an incision just above the knee and a great quantity of very soft, friable tissue was removed. From the appearance at first it seemed to be a typical case of osteo-sarcoma, but the bone proved not to have been involved. Of course had it been osteo-sarcoma, the leg would have been removed at the hip, but as it was simple sarcoma, I amputated just above the middle third of the thigh. The man reacted well, pulse went down to about 40, but in an hour or so he had rallied and the pulse went up to 100. There was very little hæmorrhage during the operation except by oozing. This growth was first noticed in July last, and has developed very rapidly since; at the time of operation the tumor was enormous. The man has had no fever nor pain, excepting some slight shooting pains from the growth within the last few days. Operation done this morning at ten o'clock; he was doing well this afternoon.

Dr. T. S. Bullock: I have nothing to say concerning the case, except that the man had a very bad heart, irregular pulse and took chloroform rather badly. When Dr. Skinner first cut into the swelling,

there was such a gush of blood that I thought he had gotten into an aneurism sack. After the tourniquet was removed the oozing increased and for this reason the man was kept upon the table longer than he would have been under other circumstances. At one time I feared we would not get him off the table alive; he became pulseless at the wrist, but by elevating the foot of the table and giving a hypodermatic injection of ether and another of whisky, and using some nitrite of amyl he reacted very nicely.

Dr. J. W. Irwin: I think the operation is a very judicious one, and where it was done makes it about as safe as anything of the kind could be. I am inclined to the opinion that the man will live some time before he has a recurrence of this trouble.

Dr. W. L. Rodman. The case so far as I know is rather unusual. Sarcoma is apt to occur more frequently in the first half of life rather than in the last half. It is rather uncommon in a man seventy-two years of age, especially in this location. In my experience, I have only seen one sarcoma of the soft parts, and that was in the thigh of a man fifty-five years of age. Osteo-sarcoma occurs most frequently in patients from twenty-eight to thirty-two years of age. Of course they occasionally occur in older subjects, but the average is between the ages of twenty-eight to thirty-two. I would like to ask Dr. Skinner what variety of sarcoma this is.

Dr. C. Skinner: No microscopical examination has yet been made.

Dr. W. L. Rodman: I have here two specimens, one of which I showed a few evenings ago at a meeting of the Surgical Society. It is a small, imperfectly developed, retained testicle, removed from a young man twenty-six years of age, who is large and well developed, weighing 180 to 190 pounds, and yet he had this very small imperfect testicle. He was ruptured on the right side and had been wearing for six or seven years a double truss. This truss on the right side probably subjected the testicle to a great deal of pressure, as it was situated just to the left of the external abdominal ring. This may account for the cystic change in the testicle. The cord was very short and would not allow the testicle to be brought down into the scrotum, even if it had been a perfect organ. I believe that the majority of incarcerated testicles are imperfect organs, and functionally inactive, and the best thing to do is to remove them. However, when they are in the abdominal cavity, they may be functionally active, and their removal would not then be advisable. This operation was done about a week ago and the dressings were changed for the first time to-day. The wound was closed by continued buried sutures; the patient's temperature never went above normal; pulse never below 60, and there has not been a drop of pus.

No. 2.—This specimen is a penis removed from a man about seventy-three years of age, giving a history that nearly twenty months ago he noticed a small wart on the glans penis. The man was a patient of Dr. Peyton's, and I saw him for the first time in consultation two days ago and advised early amputation of the penis, which was done yesterday. You will notice quite a large wart right under the glans which was as hard as a rock when it was removed. There were also enlarged glands in either inguinal region, which were carefully dissected out. The penis was entirely covered by a flap of skin; it looks very much like the natural organ, except, of course, it is very short. I would like to ask Dr. Palmer if he would have advised amputation in spite of the fact that the man had excessively enlarged glands on both sides.

Dr. E. R. Palmer: A gentleman asked me to-day in my office if I had ever amputated a penis, and I said no. I suppose my experience is peculiar in that respect. A patient was brought to me some years ago by Dr. Dowry, of Shelbyville, suffering from cancer of the penis—at least that was the diagnosis. I could not see that it was cancerous at all. and disappointed the doctor as well as the patient by not amputating the organ. I am ready to confess that I have had no experience in the matter of cancer of the penis, or amputation of the organ.

Dr. C. Skinner: When did the glands begin to enlarge in the groin?

Dr. W. L. Rodman: It has been four or five months since he first noticed the enlargement; they have been growing very slowly.

Dr. C. Skinner: I think amputation of the organ entirely justifiable.

Dr. W. L. Rodman: I will simply state in closing that I thought possibly

there might be some criticism on the operation being done. I have seen one case in which there were excellent results following amputation of the penis, and there has been no recurrence of the growth notwithstanding the fact in that case as in this, the enlarged inguinal glands were on the left side. Operation was done eighteen months ago, and there has been no rucurrence.

Dr. J. W. Irwin read a paper on "A Cause of Prostatitis." (see page 806.)

DISCUSSION.

Dr. T. S. Bullock: I have heard some talk about urethritis and prostatitis resulting from bicycle riding, but I have never seen such a case myself.

Dr. E. R. Palmer: Within the next two or three years I believe we will see a great deal in the medical journals, editorial and otherwise, in reference to the effects of bicycle riding upen the sexual apparatus and sexual powers. Given a man with absolutely sound sexual organs, I can imagine that he might possibly withstand the injurious effects of bicycle riding. At the last meeting of State (Kentucky) Society, I cited three cases of prostatic trouble that I could not account for, except by referring to previous damage on one hand, and to the immediate injury of bicycle riding on the other. In that paper I made the statement that albuminuria as a cause for rejection for life insurance, was partly referable in these cases of bicycle riding. I believe that any man who has had an attack of gonorrhœa extending over a period of three or four months, with prostatic infection, the prostatic sinuses being involved, and then gets well, endangers himself by riding a bicycle. A gentleman weighing probably two hundred and thirty pounds consulted me within the last ten days, complaining of a peculiar burning sensation during the act of micturition, with also a slight discharge from the urethra, which I think was directly referable to bicycle riding, and this is only one of a number of cases of the same character that I have seen.

I think much of this trouble could be avoided if the bicycle saddles were properly made so as to relieve the pressure upon the prostate. They should be wider with a wider gap or slit in the middle. As you probably have observed, there has recently been a marked improvement in this direction.

Dr. C. Skinner: I think a great deal depends upon knowing how to ride a wheel. In my opinion these prostatic troubles will either be found to be old prostatic troubles re-excited, or else the riders are beginners. I would like to ask Dr. Irwin if he has any history as to the length of time these men had ridden the bicycle before they came to him as patients.

I do not see why, with the seat properly adjusted, there should be any pressure upon the prostate.

Dr. T. S. Bullock: I believe that Dr, Skinner is correct, if the saddle is properly pitched, we will not have any trouble; I do not deny that trouble will occur if the saddle is improperly placed.

Dr. H. A. Cottell: I am glad to see this subject brought before a Medical Society for discussion. We have heard for several years that bicycle riding produced albuminuria, but I have never seen anything like statistics or proof on the subject. However, I have been forcibly remainded of the fact by my experience recently. I have examined a great many young men for life insurance and have found a small amount of albumen in the urine, which could be attributable to no other cause than bicycle riding. I will mention one case in particular: A young man about twenty-five years of age came to me eight weeks ago to be examined for insurance; he went through with a perfectly straight record as to everything, but upon examination of his urine I was very much surprised to find as much as one-quarter per cent of albumen. I held this man up, did not immediately reject him and have kept him under observation since then, examining his urine from time to time. The quantity of albumen has diminished, but can still be detected by careful test. He is a great bicycle rider.

In the paper and remarks thus far albuminuria has been attributed to prostatic irritation, inflammation, or a re-lighting of an old prostatitis following gonorrhœa in many cases—I believe that we may perhaps find bicycle riding will account for it all. It would take a very considerable prostatitis to give one-fourth per cent albumen in the urine; there would have to be a very decided inflammation to produce that quantity of albumen.

Dr. J. W. Irwin: In answer to Dr.

Skinner as to the length of time my patients had been riding; two were beginners, and three had ridden for about a year. I do not intend to discuss the question of albuminuria in connection with the paper, but simply the question of "Prostatitis" and "Urethritis" as a result of riding the bicycle. I cannot see the difference whether a man has or has not had gonorrhœa in the extent of injury or trauma produced by the saddle of the bicycle. If a man has a damaged organ, certainly he would be more liable to suffer from pressure of the saddle than he would otherwise. Two of the cases I reported (the history of which I did not give in detail) were men who had gonorrhœa fifteen years ago; one of them had had gonorrhœa which lasted nine months, the other lasted seven or eight weeks; they assured me that they had no other attacks. The other two cases assured me that they never had had gonorrhœa. The fifth case, a young man eighteen years of age, had gonorrhœa of very recent origin, which lasted him only a very short time, and from which he was entirely cured as far as he knew. He had been riding the bicycle four weeks before he came to my notice suffering from this form of prostatitis or prostatic urethritis, accompanied by a slight colorless discharge. So far as the shape of the saddle of the bicycle is concerned—I do not see how that concerns us now; what we want to ascertain is the effect the saddles have on these parts, the remedy will be considered later. I do not know of anything that could be more likely to prove injurious to the prostate than the chafing and pressure from the bicycle saddle. In my experience extending over twenty years, I have never seen a man who had had prostatitis get entirely well; he will always have a tender prostate gland.

I think the subject is one of much importance, and I feel this more now since the discussion than when I prepared the paper presented.

Stenographically reported by C. C. MAPES.

IN Michigan they assess a dog $1 for being a dog. In Tennessee they assess a man fifty cents for being a doctor. It costs half a dollar more to be a dog in Michigan than a doctor in Tennessee. Don't be a dog.—*Battle Creek Moon.*

Correspondence.

AN EDUCATIONAL NEED.

II

Editor of MEDICAL AND SURGICAL REPORTER:—We are always breaking away from the old and seeking after something new—it is of our temper, a human impulse of impossible resistance. Yet we are not so ungrateful or irreverent as to ignore our heritage from noble ancestors whose wise endeavors have made our civilization all it is—something in which we have a well founded pride. Everywhere are the evidences of what the genius, patient toil and intelligent gardening of the past have done for us. We have no laugh for the circumstances under which our fathers lived—they laid for us the foundations of our better conditions—their sacrifices have made our victories possible. We can move on without desecrating their landmarks. We cannot remain satisfied with being simply legatees. We will not be laying ourselves open to the imputation of presumption or insolence if we say all we have is so much of grand material with which to work and build. Possibly the best lesson our ancestors have transmitted to us is the one that they were not idlers, but men with definite aims and great ambitions. They did not gain their results through some easy mechanical process, but by toil. Our aim may be somewhat ideal. It is the supremacy of our educational system over that of every other of our country, even over that of other countries—and this for the most potent of reasons, that it is our educational systems that give direction to the genius, talent and enterprise of our country; that mitigate and make more prosperous and hopeful human conditions. It would certainly be unwise to discourage the somewhat feverish desire and creditable impulse and eagerness of our community to lead in the excellence of our educational institutions. General public sentiment has much to do with the building up of the aims, character, conduct and practical working of our institutions. This sentiment is a matter of education. Popular interest is an outgrowth of popular need. A very important question is, do our schools of medicine and surgery fully answer many practical and acknowledged needs ?

Our medical colleges have always had the prestige of great names. Identified with them have been great teachers, men eminent in science and letters, matched to every responsibility of their exacting profession. This prestige must be sustained. Our institutions of the old East will have to struggle to keep pace with those of the new and enterprising West. All our advances will largely lie with the teachers in our colleges. And the first duty of the teacher is to advance the institution with which he is associated. This can best be done through scholarly scientific attainments, by grappling with the many problems acute minds have left unsolved. The men engaged in this work are devoted to the highest of human pursuits; investigating and stimulating investigation seeking for the valuable mysteries a searching Science alone can unfold for us. The very term "professor" has a marked significance. It implies learning, scholarship, manliness, a genuine dignity, unselfish devotion, a worthy jealously of individual repute, an ambition to advance academic education in quality and quantity; it makes lustrous the name of the college to which he belongs, in which he bears the most honorable and high of all commissions. Where the appellation, professor, is officially applied it should be seen to that all is represented that the term implies. Where all the dignity and high qualities of the title are impersonated, only from the vulgar will pass the rather irreverent greeting, "How are you, Jake?"

Our colleges are well equipped for good work,—eminent teachers with all the aptitudes of their calling, with every needed resource at command, large libraries, museums and laboratories with all modern appliances. To many of them the State has not been niggardly in its munificence. And they have not been overlooked in the matter of endowments.

There can be no objection to endowments.

They are essential to the adequate equipment of schools and colleges, for the supply of the most modern and improved apparatus for the teaching of the sciences and for making the very best every condition within their walls. And they serve a beneficient purpose in relieving many of a burden they cannot carry with them "over the Styx." They can be made to serve in improving environments. One of nature's methods ofdevelopment is through environment–men are trained by their surroundings and they should be the best that money, skill, labor and time can make them

Liberal, good-living salaries should be paid to teachers, from the teachers in our common schools to the highest professor in our colleges. They are not out in the manufacturing and commercial world making fortunes, but devoting time, culture, talent, energy and vitality, all that is best of their lives tothe advancement of science; all that betters, makes more healthful and happy human conditions. Salaries, however large, fall short of the full measurement of their service.

Society cannot overrate its debt to its teachers, it can only in part recognize and pay it by measurably reducing their labor, by furnishing them with every facility that will promote easy and successful service. The fact should be taken home that the tone of private and public morals goes out from their desks. The better-thinking public may have a taste for the humor that plays on high moral grounds, but have none for the low, gross jest, nor has it other than aversion for any one in the high calling of teacher or professor who utters that which does violence to moral sentiment. It will probably require a dozen or more milleniums to pass before some few,—luckily they are very few,—will reach a complete understanding of this fact.

Yet withal it isnot so much a pecuniary or property endowment that promotes the real wealth of the school or college as it is high educational aims, pure scientific teaching, having about school and college a clean, clear, moral and intellectual atmosphere. A devoted, tireless spirit of investigation and research constitute the genius of the successful college.

In my communication in your issue of the 29th ult., I endeavored to give a few practical suggestions bearing upon at least one of our needs. I may have been somewhat vague and indefinite, yet I hope I made myself sufficiently plain for the intelligent reader to get hold of my meaning. My suggestions as to hospital uses and the establishment of open and free clinics should recommend themselves as of a practical character. When general practitioners old and young, are coming to us from every section of the country for what our

schools and hospitals, physicians and surgeons can teach them, the question is raised, what method can best be adopted to serve their high purpose? Many of these men were educated in our own colleges and should by them be kept well armed, and directed along the advancing lines of the profession. Their names may not appear on a Philadelphia chart of pedigree but they carry a stalwart American manhood under their hats that settles upon them the title of the proudest peerages. They are not of "The royal lineage of our noble and gentle families," but are humble men without any ambition to date their ancestry back of that very conservative, easy-going old gentleman gardener, Adam.

They are a little ahead of those who, with something of an air of insolence claim to know more,—indeed to know it all. They realize the vastness of the things they do not know. There are things about which they have a sound sense of ignorance and they are zealous and patient in their endeavors to widen the fields of their science and general knowledge. They realize that their greater success is limited only by lack of knowledge of what to do, and when and how to do it. They are men eminently capable of intelligent appreciation of good work; they would improve their own methods of practice by the best evolved by pure science or by clinical study, research and result. They would widen the range of their general knowledge and equip themselves with modern weapons with which to grapple with modern conditions. All this from their love of and interest in their profession and for the better service of humanity. They worthily seek honorable eminence in their profession, local or general. It is true that it does not lie within the powers of any institution or within the possibility of any form of democracy to make all men equal, any more than it does to make all men's feet of the same size, or to reduce to a modest standard some men's egotism. But among our possibilities is that of making every man better, morally and intellectually; to better fit him for his work, offer him the instruments wherewith he can do it well. We have all the instruments, all the agencies and facilities for this work about the tables of our clinics and within our hospital walls. The oversensitiveness of the lay authorities of our hospitals to the clinical, the bedside use of patients, in the study and development of a growing science in which is wrapped up human weal, will give way before the nearing light of a new century. Hospitals should be added to and made part of the machinery of medical education. In them should be organized a system of clinical teaching in all lines, special and general and specialists should not be excluded from their staffs, as they are, under the pretext and sham of economy.

We hear of no objection offered in our private special hospitals to the presence of visiting practitioners and their profiting by the clinical use of cases; if there are any exceptions to this rule, they are as rare as they are discreditable. And the fact should be considered that the patients in these private hospitals usually pay their own way, while those in the public ones are the beneficiaries of public or private charity. We are not advocating any abuse of human decency—the exercise of arbitrary power over those who by the misfortunes of accident or disease are brought to the beds of our hospitals, but we are endeavoring to break down an unreasoning and unreasonable prejudice. The popular prejudice against such use will disappear with its adoption. Certainly there should be something reciprocal in this matter—a recognized debt due from those whose needs and sufferings communities care for—Christian charity ministers to. This debt can best be paid to those co-ordinate workers, Medical Science and Surgery, whose noble mission is to mitigate human suffering, prolong human life, and restore that strength to man and woman which will make happier their conditions enable them to work longer and better, and fill out their lives with usefulness.

Yours truly,

JOSEPH PRICE, M. D.

Preston Retreat.

Doctor, said the dying editor, I have one last favor to ask of you.

Name it, said the doctor.

I want you to attend the editor of the other paper!

HE FORGOT SOMETHING.—*Doctor*—I will leave you this medicine to take after each meal.

Mike—And will yez be koind enough to lave the meal, too, dochtor?—*Tid-Bits.*

THE

Medical and Surgical Reporter

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THE MEDICAL AND SURGICAL REPORTER.

SATURDAY NOVEMBER 19TH, 1862.

MAKING REPAIRS.

There are some practical suggestions in an excellent paper by Dr. Luther B. Grandy, of Atlanta, Ga., read before the Tri-State Medical Society of Georgia, Alabama and Tennessee, an analysis of which is given in the *Virginia Medical Monthly*. Without attempt at review we call the author's statements and pertinent criticism to the attention of the profession as worthy of thoughtful consideration. We regard them as having more than a local application. He gives the testimony of an eminent physician which is not without its application to our time and systems of medical education. Referring to the earlier systems he says they "now look back upon their medical college career as an unimportant epoch, and think of those days as a work of confusion. The instruction afforded by this system of medical education was hurried, superficial, and most inadequate to our wants, the course consisting rather in calling the attention of the student to the *art* of medicine, instead of teaching him the *sound principles* upon which is governed the great field of active practice." Again he says, "I attended the prescribed two courses of lectures in a medical college; each course lasted about five months, and was precisely the same. There was no laboratory course, and I began to attend clinical lectures the first day of the first course. One result of this, was that I had to learn chemical manipulation, the practical use of the microscope, etc, at a later period when it was much more difficult; in fact, I may say, that I have been studying ever since to repair the deficiencies in my medicial training, and have never been able to catch up." When our old, able, cultured and honored men, men whose professional lives are crowded full of the lessons of rich, varied and great experiences, tell us that they have been studying to repair the deficiencies in their medical training and have never been able to catch up, hooves us to look with very keen scrutiny for the defects in our existing systems. We never get out of school, but we do not want to have to go back to our primers in our old age,—to waste practical years in unlearning the lessons learned preparatory to our work. The hints of these men are invaluable. They direct us into better ways and teach the possibility of better things; they drive out many old conceits; they infuse into the profession a spirit that will ultimately crowd to the wall all coxcombs, charlatans and quacks, and give us something better than mere book-read and theory-stuffed men. It is true that time has taught the inefficiency of many old methods, and it is true that our methods will go on improving as science and better teaching continue revealing their incompleteness and adjusting

newly discovered principles to better understood facts and conditions of life. Our older institutions are historical in their growth; in spirit and effort they have kept step with ever changing conditions; they have not permitted modern demands far exceed their grasp.

Our old teachers cherished some delusions we do not, we cherish some they do not. Medicine has not reached the point of an exact science, and never will, but our advances in scientific knowledge will be steady and certain, and general practice will share in these advances. There is something of tremendous energy, of heroic temper in the efforts of our generation to advance the standard of education, both along professional and general lines. There is a current faith that while our educational systems serve a high purpose, it is within the possibilities for them to yet more efficiently serve a yet higher purpose; that while they are good they can be made better. The best method may be superseded by a better, the antiquated by the more modern, plain and simple. The modern educated physician and surgeon is inspired by a new pride in his profession, he feels the augmentation of his resources, he is drawing more and more freely from the exhaustless mines of pure science, and less and less from ancient mythology. He is leading a life of performance, proved not so much in his inheritance or special gifts, as in his attainments; he has, as a motive, something nobler than the rapid accumulation of wealth.

The chief stimulus and encouragement of the physician lies in the high aims and tendencies of the profession; in the manhood attracted to it, in the innate moral worth and high culture of its personnel, in the enlargement of the idea as to what constitutes medical education and makes up the highest and best professional character.

The weight carried by the profession, by which it is most burdened and which most retards its advances is made up of the men who will not break away from old traditions, who "have died before they expired," but from whom all ambition to move on, for work and growth, has passed; the ones who, satisfied with old and imperfect results, have no care for better ones; men who are contented with their little bundle of dusty experiences and deny the existence of better ones. Nothing would be so agonizing to these men as the puncture of their shams. Equally heavy to carry are those imponderable individuals the little cherubs who are complacently waiting the coming of their wings. Their diplomas procured, the measure of their ambition is filled out, and with them life is only a *waiting* from the date of their diplomas to the date of their funeral certificates. To this class such a thing as study, investigation, even thought—would be painful. Infinitely little units forming in the aggregate a massive burden.

Better material, more brains, and higher purpose would be introduced into the profession by broadening educational requirements for entrance into the medical college, by extending the terms of study and by making more rigid the examinations before granting certificates of graduation. Such a practice would not tend to deprive the farms and workshop of laborers, nor to deplete the ranks of shoemakers. In nearly all the mechanical trades an apprenticeship of from two to four years is required, years with fifty-two working weeks in them and with days of ten working hours, all this, perchance, to learn how to make or to repair a wagon. Yet we require an apprenticeship of only two or three years of five or six months each for the student of medicine to make himself familiar with all the minute parts of our complex human economy; with the inherent and essential laws of man's physical make up. Brief time in which to master the rudimentary elements of a science infinite in its reachings—a science

that involves spirit, mind and body in their inter-relations. Is this not rather turning loose a lot of experimenters to ply a trade on the ignorant and unfortunate. The army and naval authorities set a good example in this matter, the medical and surgical appointees in these branches of the public service are subjected to the most searching of examinations in every branch and detail of medical and surgical science, and only those pass muster who meet the rigid requirements. Dr. Towler says sixty-eight per cent. of the applicants fail to pass. And with these authorities it is not enough for a man to be filled with information, he must have the art to make its application to practical uses. He must be something more than a mere medical encyclopedia.

Too many enter the profession on a calculation of profits on a minimum amount of labor—the grave responsibilities are of secondary consideration. We need to have a very high ideal, and severely measure our actual by it. The physician should be greater than his profession—in him and not in his calling should be the elements of predominance. He must within himself be a master if he would be a master in his work. There is no profession, not even that associated with the science and art of war, in which every element of the heroic so largely enters.

The physician is representative of the very best interests of his community, moral, social, intellectual and physical. Knowledge of human physical disorders, is but part of the knowledge he should possess. There are moral and social disorders of which the physical are often the outgrowth—so one knows this fact better than the physician. He carries the secrets of half the families in the community in which he practices; knows something of the skeletons in their closets—has it in his power to destroy domestic happiness at the bidding of avarice, malice, or revenge for some real or imaginary wrong. Usually he is the practical humanitarian in the community in which his work locates him. And no class of men exercise as great an influence in breaking down the partitions of caste, and liberalizing social tendencies. The conscientious physician's life, from the time he passes without the college walls, is one of brave service and sacrifice. His life must be persevering, unselfish and generous, or he clouds his name and dwarfs his influence. He must have the nerve to move with an unwavering courage amid many shadows, carrying as his burden the unutterable doubts and woes of others, the fullness of his responsibilities known to Omniscience alone.

DIFFERENCES BETWEEN SOFT CHANCRE AND SYPHILIS.

Soft Chancre.	Syphilis.
1. Appears immediately after infection.	1. Does not appear for several weeks after infection.
2. Primary lesion soft and devoid of induration; suppurates.	2. Primary lesion hard, indurated, seldom suppurates.
3. Sore generally multiple.	3. Sore generally single.
4. Is auto-inoculable.	4. Not inoculable on the same subject.
5. Followed by suppurating bubo.	5. Followed by indurated bubo
6. Bubo single.	6. Buboes multiple.
7. Not followed by secondary or tertitary manifestations.	7. Generally succeeded by secondary and tertiary manifestations.
8. Constitution not contaminated—a local disease.	8. A constitutional disease.
9. Not capable of hereditary transmission.	9. Capable of hereditary transmission.
10. Does not require mercury for its cure.	10. Requires mercury for its cure.
11. Capable of being destroyed by caustics.	11. Not capable of being destroyed by caustics.
12. Does not protect from future attacks.	12. Protects from future attacks.

—*Med. Reporter.*

Translations.

M. B. WERNER, M. D.
PHILADELPHIA, PA.

Treatment of syphilis by subcutaneous injections of a five per cent. solution of sublimate. (Wiener Klin, Woch., 1892). The happy results of Lassar and Oestricher following the use of injections of sublimate solution in 100 unselected cases, served as an impetus to the author of the present paper, W. Lukasiewiez to make further investigations. The solution used was as follows:

Sublimat., 0.5, sodium chlor., 0.5, aq. dest., 10.0, a syringeful of this injected weekly into the gluteal region. In the eleven patients under treatment Lukasiewiez, noticed a slight rise in the temperature after the first injection. Examination of the blood showed an increase of the red blood corpuscles, and a rise of its specific gravity; this was observed only during the first few days, proving a primary thickening of the blood. The number of injections varied in each individual case between 4–12. Considering, however, the rapid excretion of the mercurial salt the author thinks it best to give no less than six to eight injections to establish a cure. The results are usually prompt, improvement in the general health, the syphilitic manifestations disappear rapidly, even in cases which have failed to respond to other methods of treatment. It was the exception to have a slight infiltration follow the injections; these as a rule were not painful.

N. P. Krawkow (*Centralb f. Medizin., Wiss.*, No. 14, 1892) in his studies upon the origin of diabetes made upon the individual organs of dead subjects, arrived at the following conclusions:

1st. Carbo-hydrates could be produced in all the organs in considerable quantities—the liver, however, giving the least.

2d. The glycogen of the organs furnishes the sugar by a retrograde metamorphosis of its cells.

3d. There is a constant comparative fluctuation between the amount of glycogen and sugar.

4th. The distribution of glycogen among the organs deviates markedly from the normal when diabetes is present, and it is found in such organs where it is absent under normal conditions; for instance, in the brain.

5. The occurrence of glycogen in diabetes must not be placed in comparison to the inflammatory processes. Diabetes is recognized by the presence of glycogen as well as sugar.

6. The cartilaginous tissues of diabetics suffer marked changes in connection with the formation of the carbo-hydrates.

7. The increased production of sugar in diabetes, can be explained by the increased production of glycogen, and general reduction of strength in the organism, this latter resulting in a lack of appropriation of the produced glycogen.

8. The theory of carbo-hydrate atrophy of the tissues is the best one suited to explain the symptoms of diabetes.

H. Schlange: Irreducible luxation of the knee-joint (Deut. Med. Woch., No. 15, 1892). Patient, æt. 58, fell some distance and was caught by the right leg between two boards. Flexion or abduction as well as rotation of the leg, all showed a marked flattening of the right knee joint, due to an outward displacement of both tibia and fibula. The external condyle of the femur could be felt on the inner articulating surface of the tibia. The patella was also displaced outwardly. Varied efforts were made at reduction under narcosis, but without success. An incision over the prominent external condyle of the femur disclosed that bone tightly fixed in a rupture of the capsule near the head of the tibia; reposition became possible only after enlarging this tear. Both ligamentæ cruciata were torn, as was also a portion of the vastus externus muscle, one handsbreadth above the rupture of the capsule. This complication together with an extensive ulcerative eczema below the knee, made it necessary to tampon the wound and capsular tear, the external wound being only partially closed. The tampon was removed after 2 days and the entire wound closed. This resulted in an uninterrupted recovery, with a restoration of almost normal function. The author calls attention to an analogous case reported by Braun, in which, however, the rotation of the leg was inward. The treatment also consisted in the reduction by cutting operation, the wound was washed with a 3 per cent. sol. of acid carbol., and drained—healing was slow and unsatisfactory—followed by anchylosis. Schlange concludes by stating that progressive knowledge in surgery was the cause of his success.

Poppert: (Munich Med. Woch., 1892) reports a case of ileus induced by tubercular peritonitis and cured by abdominal section. Case, female, 11 years, was admitted to the surgical clinic at Giessen. The condition of the patient was so poor, that it was deemed best to make a fistulous opening into the small intestine, the numerous adhesions making it possible to extend operative procedure. The result was excellent, the symptoms of ileus at once disappeared, and in a few days a normal movement occurred and the intestinal fistula closed spontaneously.

V. Gross: A case of tubal pregnancy, internal hæmorrhage, death. (Corresp-blat. f. Shweitz Aerzte, 1892). Patient, æt. 38, enjoyed previous good health, was suddenly attacked with vomiting and faintness, pain in the left side of the abdomen, ringing in the ears, feeling of fear, and dyspnœa. Her condition was not recognized by her physician, who treated her for influenza of the abdomen. The treatment consists of hot poultices on the abdomen, injections of tincture of musk, champagne. Death occurred the same evening. Section revealed a ruptured tubal pregnancy.

APOSTOLI'S METHODS.

Apostoli's clinic, according to a contemporary, is daily overcrowded by patients and physicions, which evidences the fact that his results are satisfactory to those most interested. For this method of treatment it often requires much confidence and forbearance on the part of the patient, and patience on the physician's part. Apostoli's method of administering the treatment, especially taxes the good nature of his patients. He requires each one to make preparation by removing every article of clothing, except a loose wrapper, and places her on a high table, with the wrapper drawn over the breast, so as to expose her from the ribs down. She there receives an antiseptic vaginal douche, and his large, cold, clay electrode is then clapped suddenly on the sensitive abdomen. All this must be exceedingly trying to a patient, being performed in the presence of ten to fifteen strange physicians from all parts of the world. It is difficult enough for American patients to submit to the slight incidental pain, in a private office and no exposure of person.—*Med. Review.*

Abstracts.

A SUBSTITUTE FOR INTUBATION.

L. L. Palmer, M. D., in the Ontario Medical Journal, Oct. '92, says that from reports, one might conclude that intubation was short lived. He has observed that most criticism comes from those of little or no experience, or unable to perform intubation. He believes it has come to stay, and is more preferable than tracheotomy. But the majority of physicians are not equipped with O'Dwyer's tubes and many lives are lost that otherwise might be saved.

He says the indication for intubation is stenosis, due to two conditions. (1.) Inflammatory tumefaction. (2). Exudation: Both of which may combine to close the larynx, or either, predominating, may cause asphyxia and death. Tumefaction is not always the chief factor. The exudation may become so thick and extensive as to be the sole cause of dyspnœa, which if removed, almost normal respiration is restored.

For this purpose he has devised a fine brush, upon a bent platinum probe—hair pointing upward; so that it is easily introduced and offers greatest resistance on removal. The same probe may be used, wound around with absorbent cotton. This should be carefully introduced into the larynx, using no force.

Not more than five or six seconds, should be occupied in introducing and removing it. The child's body and head being held erect. The membrane is readily removed. If any remain, it is so loosened that it is brought up by the child's coughing.

This procedure should be used as often as necessary.

He concludes that no physician is justified in allowing a child to die asphyxiated, from diphtheritic membrane, without resorting to this simple expedient.

TREATMENT OF STRANGULATED HERNIA.

Dr. W. B. De Garmo, in the Post Graduate, says that there is no branch of surgery wherein so many lives have been needlessly sacrificed as in the treatment of strangulated hernia. The practitioners either do not recognize the grave condi-

tions, or else being unable to operate, waste precious time employing taxis, until it is too late to call a surgeon.

Delays are fatal. Too much time should not be spent in trying one after another of the many remedies recommended for this serious condition. Inasmuch as the trouble is a mechanical one, every physician should be competent and ready to operate at any time. The theory is untrue that muscular spasm is an active cause of strangulated hernia. It is a waste of words to name the different remedies. Opium has cost many a person his life; it quiets fever and pain, masks the symptoms, but the pathological changes are going on while both physician and patient are deceived. The means for relief before operating may be considered briefly as follows:

1. Morphia, hypodermically, for relief of pain only.
2. Sulphuric ether applied to tumor.
3. Taxis gently and intelligently applied.
4. Taxis under anæsthesia.

The early application of ice was for many years considered the safest procedure. To reduce the tumor, he prefers the application of ether, as being the best and safest.

Great injury is often done by rough manipulation, in trying to effect a reduction. The most extreme care and gentleness should be observed. If reduction does not follow taxis when ether is systematically used, then taxis should be employed under anæsthesia, which has the double advantage in case manipulation fails, then the patient is ready for operation which should be immediately done, every thing having been gotten ready beforehand.

The operation is not a difficult one, only requiring a steady hand and cool head. To those who have never operated the following conditions are pertinent:

1. Instruments necessary.
2. Asepsis and antisepsis,
   - a. Of operator and assistants.
   - b. Patient.
   - c. Instruments.
3. The incision.
4. Opening of sac.
5. Treatment of intestine.
6. Treatment of omentum.
7. Completion of operation.

Only few instruments are necessary, a scalpel, artery clamps, groove director, scissors, ligatures, sponges, needles, gauze, different kinds, and bandages. Make every thing aseptic, special care being paid to the nails of assistant physician. The primary incision should be made over the bulk of tumor reaching the neck of tumor as soon as possible. When the hernial sac is exposed, it serves as a guide to the opening through which it protrudes. Having found the seat of constriction, the question will arise, whether to cut this band and reduce the sac without seeing its contents. Opening the sac does not materially increase the risk of operation, if the operator is clean.

The bowel should be thoroughly examined and treated according to its condition; good surgery should be strictly carried out.

The next consideration is to complete the operation, giving the patient the best possible chance for a permanent cure. In order to do this the inguinal canal must be placed in as nearly a normal condition as possible. He practices cutting off the sac as near the inguinal ring as possible and then stitching up the canal with heavy braided silk, which is left in situ. The wound is properly closed and dressings are applied. Loops of intestine, having been subjected to pressure, are liable to partial paralysis. For this condition, he recommends giving a mild saline cathartic on second day. The use of opium is discouraged unless urgently demanded for the relief of pain.

AMPUTATION OF THIGH.

Dr. Nicholas Sinn, in a clinical lecture delivered at the annual meeting of the association of military surgeons, said that there are only a few essential principles that become necessary to memorize and to carry into effect in amputating through any part of the lower or upper extremities. If it is remembered to make the incision, so as to bring the resulting scar away from pressure in wearing an artificial limb. To preserve the periosteum, and to amputate the principal nerve trunks at least an inch above the level of the incision through the soft parts, which prevents a neuroma, and under all circumstances to secure complete hæmostasis.

He says, "that it makes his blood curdle and hair stand on end" when in this progressive time and age, men are held up in courts of justice, to answer a mal

practice suit, for having made a posterior long or lateral flap. Old text-books are still revered by lawyers, but are of little use to the surgeon. The proper plan is to take the flap from any region best adapted to serve as a covering for the stump.

Dr. Senn has discarded the use of the elastic bandage in rendering a limb avascular and empties the blood-vessels by simply elevating the member. He believes that the use of the elastic bandage is not only superfluous, but in all pathological conditions especially, is very dangerous, as its application from the distal part to and over the diseased point to the proximal side, may force the pathological process into the general circulation, which might be the cause of a dissemination of the process. When the limb is rendered avascular by elevation he interrupts the circulation at once by sudden proximal compression. He avoids linear compression by using a broad constrictor, and protects nerve structures by using a thick layer of gauze under the constrictor, when its superficial part cannot be avoided.

THE ETIOLOGY OF ATROPHIC RHINITIS.

Dr. W. B. McClure, in The American Practitioner and News, says that chronic hypertrophy of the nasal mucous membrane may ultimately result in atrophy of that membrane. After a long period of investigation and careful study of this disease, he arrives at the following conclusions:

(1) Atrophic rhinitis is the ultimate and logical result of neglected hypertrophy of the nasal mucous membrane and never occurs as a primary disease.

(2) Its chief cause is from lack of nutrition caused by cutting off its blood supply.

(3) The atrophic process is by desquamative inflammation.

(4) That the beginning of atrophy, is superinduced by hyperæmia of the membrane.

THE LOCAL USE OF PHENACETIN.

Dr. M. A. Lee, in the Memphis Medical Monthly, records another use for phenacetin.

Having a case of chronic ulcer of the leg, on which he had used all the local applications, commonly prescribed, for such conditions, without success; it occurred to him to try the use of phenacetin.

The sore was thoroughly cleansed and the drug, finely powdered, was dusted over the ulcer three times daily.

Improvement immediately followed. The treatment was continued, resulting in a complete cure.

Having a number of other cases, he pursued the same treatment, with most pleasing results.

In order to be effective the sore must be thoroughly cleansed and the patient placed on supportive treatment and good nourishing diet.

SCIENCE AND WOMEN.

Professor William James, of Harvard, announces that woman develops early and then ceases to grow mentally. Professor Crichton Browne finds that women's brains are smaller than men's, and their frontal lobes less richly supplied with blood, Professor Lombroso finds that women are less sensitive than men, and, as regards their receptive and perceptive organs, represent an incompletely developed type. Altogether, science is bearing down very hard on the ladies. Yet we do not learn that they are becoming any the less popular. The poet has said metrically that without them the extremes of life would be without solace and its middle without joy. The testimony of the poet will probably continue to be received by the mass of human kind, even if the greatest cranial circumference of the gentler sex never rises above fifty centimetres.

BOOKS RECEIVED.

Text-book of Ophthalmology. By Dr. Ernest Fuchs, Professor of Ophthalmology in the University of Vienna. Authorized translation from the second enlarged and improved German Edition, By A. Duane., M. D. Assistant surgeon Ophthalmic and Aural Institute, New York. New York: D. Appleton & Co., 1892.

A Handbook of Hygiene and Sanitary Science. By George Wilson, M. A., M. D., F. R. S. Edin., etc. Seventh Edition. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut Street, 1892. $3.25

Aene and Alopecia. By L. Duncan Bulkley, A. M,. M. D. The Physician's Leisure Library Series, 1892; George S. Davis, Detroit, Mich. 25 cents.

The Mastoid Operation, Including its History Anatomy and Pathology. By Samuel Ellsworth Allen, M. D. Cincinnati: Robert Clark & Co., 1892.

A Public Scandal: An Exposure. By Frank S. Billings, M. D. Printed and published at the expense of the author.

Souvenir of Asheville, or the Sky-Land. By Mrs Harriet Adams Swayer, St. Louis. Nixon-Jones Printing Co., 1892. Sent by Author on receipt of 75 cents.

Alaskana, or Alaska in Descriptive and Legendary Poems. By Prof. Bushrod W. James, A. M., M. D., Philadelphia: Porter & Coates, 1892.

Periscope.

THERAPEUTICS.

PHENACETINE.

Dr. John V. Shoemaker, in writing on the subject of the treatment of influenza, states that the aching pains yield most readily to phenacetine, given in doses of two or three grains, repeated at intervals of two hours, until the desired effect is obtained. From two to four doses have usually been sufficient. No ill effects usually result from the same dose of phenacetine. Some prefer to give larger doses of this drug at longer intervals. Others, again, praise a combination of phenacetine and salol, two or three grains of each repeated. Other antipyretics should be avoided, as phenacetine is by far the safest of the agents. Moreover, but few doses are usually required, when the drug can be replaced by tonics, especially small doses of strychnine or nux vomica. Phenacetine has also the advantage of acting upon the skin.—*Ont. Med. Jour.*

COCAINE ANTIDOTES.

S. Mitchell (*Medical Record*) has found that while ammonia, digitalis and brandy will relieve the milder toxic manifestations of cocaine poisoning, they signally fail when these symptoms are superseded by severe præcordial pain, weak and rapid pulse, sighing respiration, borborygmus and belching of wind, muscular rigidity, and, later, paralysis of the whole body except the brain, which is unnaturally active. In such a case he used a large teacupful of clear coffee, and has found it equally efficacious on subsequent occasions. It can be administered cold or hot. He makes no mention of amyl nitrite.

Gluck (*Ibid*) advocates dissolving the cocaine in a three per cent. solution of phenol. This, he claims, prevents the toxic effects of the former drug and renders the solution stable; as is well known, such solutions otherwise lose their anæsthesic effects after twenty-four hours. Phenol, besides, has a certain anæsthetic power of its own, forms a superficial eschar, which prevents absorption of the cocaine, destroys bacteria, fungi, etc., prevents decomposition in the solution, renders it aseptic, and wards off reactive congestion.

BISMUTH SUBNITRATE IN BURNS—NEW MODE OF EMPLOYMENT.

In burns, Dr. K. von Bardeleben, of the Friedrichshain Hospital, Berlin, employs tarlatan bandages impregnated with a mixture of equal parts of bismuth subnitrate and powdered starch. These bandages are applied directly to the affected parts, which are previously washed and disinfected with a three per cent. solution of carbolic acid or with a three-tenths per cent. solution of salicylic acid. The first dressing of this kind is left in place at least eight days, and if necessary, for two and even four weeks.

As can readily be seen, this dressing is not applicable to burns of the face, which we would be compelled simply to powder with bismuth—a procedure which the author regards as defective and slovenly, and one in which a considerable quantity of the medicament is wasted.

In burns occasioned by chemicals, it is deemed necessary, before applying the bismuth dressing, to neutralize the caustic which has penetrated the tissues, by means of washing with lime water if an acid was the escharotic, or with vinegar if the burn was produced by an alkali.—*Merck's Bulletin.*

SALOL IN GONORRHOEA.

Dr. E. C. Underwood says that salol can reduce the duration of gonorrhœa to the lowest limits. This method consists in the regular employment of from forty to sixty grains of salol through the day. "I order my patients to have four doses of from ten to fifteen grains each, taken immediately on rising in the morning, at 11 o'clock A. M., 4 o'clock P. M., and the last thing on retiring to bed. At first, I ordered it in powders or compressed tablets. But learning that many of these tablets passed through the intestinal canal without being absorbed, and in the form they were administered, I am now using the drug in powder form. It is tasteless and is not complained of by patients. The dose is begun, unless the patient shows that the drug disagrees with him, with sixty grains a day, and continued until the discharge has become very meager. Then it is gradually lessened." The author claims that better results follow this method than any other.—*Atlanta Medical Journal.*

ICE IN DYSENTERY.

In dysentery, when the lower part of the colon is affected, the local use of ice sometimes has an almost marvellous effect. H. C. Wood has seen the whole aspect of a very severe and alarming case, in which the symptoms indicated that the colon was affected high up, changed in a single hour by the continuous use of ice suppositories. While it is not necessary to have the pieces of ice entirely regular in shape, care should be exercised that no sharp edges are left. The suppositories should be rapidly used, one being put into the rectum every three to five minutes, so as to get, for at least half an hour to an hour, the effect of the continuous application of cold. When the tenesmus is very severe, iodoform suppositories are often much more efficient than opium in bringing relief.—*Memphis Med. Monthly.*

EUCALYPTOL BY INHALATION IN PULMONARY PHTHISIS.

Dr. Marche reports that he has for more than a year been treating all cases of pulmonary tuberculosis by means of inhalations of Eucalyptol, associated with creasote. Into a saucepan holding 1-2 liters [about 1-2 quarts] and filled with water, he pours per litre 1 or 2 spoonfuls of the following solution (*Med. Mod.*):

Eucalyptol	20 parts.
Creosote (Beech-wood)	8 "
Alcohol	72 "

The whole is made to boil over an ordinary oil-stove; when the saucepan is almost empty, it is refilled with water, the solution added, and the whole heated, as before. The patient should be placed in a pretty spacious but well-closed room, and remain there as long as possible.

This medication the author has continued uninterruptedly for several months without provoking the least sign of intolerance. It therefore appears worthy of a trial; but, of course, it is not destined to replace the hypodermic method of treating phthisis.—*Merck's Bulletin.*

ZINC OXIDE IN HYSTERO-EPILEPSY.

Only a very short time ago Dr. P. Cascini related the favorable results he had obtained from quinine in certain cases of hystero-epileptic convulsions of a periodic type (see August number of *Merck's Bulletin*, p. 450). Now Dr. Niermeyer of Amsterdam recommends against that same affection, so rebellious to therapeutic means, another medicament just as old, formerly often employed in the capacity of a nervine but at present more or less forsaken,—and that is zinc oxide. Of 20 cases of hystero-epilepsy that had resisted all other medicaments so far employed, the author obtained considerable improvement in 15, even in a few days, from the administration of zinc oxide in doses of 50 centigrammes [7½ grains] in the course of twenty-four hours (given with equal parts of powdered valerian or rhubarb). He therefore feels justified in recommending zinc oxide in the treatment of the convulsive paroxysms of hysteria.—*Merck's Bulletin*, October, 1892.

A TREATMENT OF SEBORRHOEA OF THE SCALP.

Dr. Saalfeld (*La Rif. Med.* No. 98, 1892), in cases of seborrhœa of the hairy scalp, with a tendency to alopecia, recommends the following method: At night scrub the roots of the hair energetically with an alkaline solution of green soap, and pour on a little tepid water to cause the soap to foam; leave this foam on the scalp for a few minutes; removing this with tepid water and then apply the following salve:

℞

Flowers of sulphur (grs. xlv-℥jss).	gms. 3-5
Lanoline (grs. xlv).	gms. 3
Benzoated lard (℥j).	gms. 30

This salve prevents the formation of crusts in excess. If the patient suffers from pruritus, which is often the case, then add thirty to fifty centigrammes (5 to 8 grains) of salicylic acid, previously dissolved in a slight quantity of rectified alcohol. Wash the hair and apply the salve, at first every day, and when results are obtained every eight to fifteen days.

SILVER NITRATE IN GONORRHOEAL EPIDIDYMITIS.

According to Dr. T. Trzcinski, physician to the Hospital Saint-Lazare at Warsaw, blennorrhagic orchi-epididymitis may be aborted in the beginning by means of local revulsion with a 1:10 ointment of silver nitrate. He completely envelops

the diseased testicle with a small linen compress spread with a pretty thick layer of this salve; then he places cotton over the compress, applies a suspensory, and leaves the dressing in situ for twenty-four hours, which the patient should pass in bed.

It is stated that the application of the ointment provokes an intense burning sensation, which, however, dies out in an hour or two; but, at the same time, the testicular pain considerably diminishes. Twenty-four hours afterward, when the dressing is removed, the scrotal skin is found partly colored black and partly red and moist, and it is observed that the testicle has become much less painful. A simple dressing of cotton is then applied for twenty-four hours, and after that the patient wears a padded suspensory.—*Merck's Bulletin*, October, 1892.

FROST BITES—(TREATMENT.)

[Paschkis—*Ther. Monatsh.*]

—LINIMENT.—

Tannic Acid..... 1 part.
Glycerin (or Camphor Spirit).....25 parts.
Externally!

or:

Tannic Acid..... 3 parts.
Alcohol..... 5 "
Collodion.....20 "
Benzoin Tincture..... 2 "

[Carrie.]

—OINTMENT.—

Powdered Camphor..... 3 grammes [45 grains].
Lanolin } of each, 15 " [½ ounce].
Vaselin }
Hydrochloric Acid..... 2 " [½ fl. dr.]
Rub-in at night!

[Rust.]

—PAINT.—

Peru Balsam..... 5 grammes [70 min].
Oleo-balsamic Mixture } of each, 30 " [1 fl. oz.].
Cologne Water }
Externally!

[Husemann.]

—LOTION.—

Alum } of each, 2 grammes [30 grains].
Borax }
Rose Water.....150 " [5 fl. oz.].
Benzoin Tincture..... 5 " [80 min.].
Externally!

BLACKENING OF THE TEETH BY ANTIPYRINE.

It is asserted that the internal use of antipyrine blackens the teeth; this peculiarity should be generally known by the profession, and also among the laity, that objections may be made on this ground to taking it as a remedy. The blackening is the more intense, the more imperfect the enamel, but may be removed by attrition with dilute acid. The considerable use of antiprine for several years back, gives importance to this last observation.—*Ontario Medical Journal.*

EXOPHTHALMIC GOITRE.

Dr. Dieulafoy, writing in the *Bulletin Medical*, says that in cases of exophthalmic goitre the aim of treatment should be to lower the vascular excitement. He compares patients with this affection to those threatened with pulmonary hemorrhage, and treats them in the same way. He gives from four to six pills a day, made according to the following formula:

℞ Pulve. ipecac..... grs. vj.
Pulv. digitalis..... grs. iv.
Ext. opii..... grs. ss.
M. et. ft. pil. No. xij.

The only inconvenience of this medication is an occasional diarrhœa, which may be troublesome until a tolerance is established.

PERMANGANATE POTASSIUM IN THE TREATMENT OF DIPHTHERIA.

Bown reports (*Ex.*) several cases of diptheria in which most excellent results were obtained by the use of a solution of permanganate of potash of the strength of three grains to the ounce. Three or four applications an hour were made directly to the membrane with a large camel's-hair brush for eight or twelve hours. After this once every two to six hours is sufficient. In some cases a spray is a better method of application.—*Med. Review.*

SURGERY.

THE ANTISEPTIC TREATMENT OF GONORRHOEA.

Dr. Vatier (*La Rif. Med.* No. 100, 1892,) in order to avoid the the pain which corrosive sublimate produces when used as an injection strong enough te exercise an antiseptic effect in gonorrhœa, associates antipyrin with it in the following formula:

℞ Antipyrin..... gms. 5
(5jss).
Corrosive sublimate..... gms. 05
(gr. j).
Aqua..... O j.

This combination of remedies permits one to begin the treatment at any period

of the disease. It may also be used as a preventative. The solution should be allowed to remain not less than half an hour in the urethra. Inject three or four times a day. In general, inject as often as one urinates.

OPERATIONS ON THE NOSE.

Dr. Clarence C. Rice concludes (*Post-Graduate*) the only way to become skillful with instruments of examination and expert in diagnosis is to personally examine the upper respiratory tract of as many patients as possible. Cases for operation on the nose should be selected only after careful deliberation, and the relation in size between the obstruction and the total capacity of the nostril should be considered. When in doubt about the necessity for operation, try for a time treatment by topical application. There are many cases of so-called "hypertrophic rhinitis" where the apparent hypertrophies are nothing more than erectile tissues distended by blood or serum, and many of these do not require the application of any destructive agent. The effect of a weak solution of cocaine upon these will aid in their diagnosis. We do not find advanced hypertrophic changes in young people. The soft tissues are usually nearly normal, so it is not wise to injure physiological tissues by operative procedure. Deformities of the nasal septum are usually the first pathological condition to appear, and are the cause of the later changes in the soft structures of the nose. The removal of this septal lesion should first claim the attention of the operator. Do not produce by operative measures large ulcerations on the septum, if they can be avoided, as there may be present in the case some constitutional vice, and therefore the ulcerations will be healed with difficulty. Nothing is more efficacious in their treatment than the use of antiseptic washes and covering.

TTEATMENT OF APPENDICTIS.

Dr. Senn's conclusions are these, viz.: (1) All cases of catarrh and ulcerative appendicitis should be treated by laparotomy and excision of the appendix as soon as the lesion can be recognized. (2) Excision of the appendix in cases of simple, uncomplicated appendicitis is one of the easiest and safest of all intra-abdominal operations. (3) Excisions of the appendix in cases of appendicitis before perforation has occurred is both a curative and prophylactic measure. (4) The most constant and reliable symptoms indicating the existence of appendicitis are recurring pains and circumscribed tenderness in the region of the appendix. (4) All operations should be done through a straight incision; parallel to and directly over the cæcum. (6) The stump after excision of the appendix should be carefully disinfected, iodoformized, and covered with peritoneum by suturing the serous surface of the cæcum on each side over it with a number of Lembert stitches. (7) The abdominal incision should be closed by two rows of sutures, the first embracing the peritoneum, and the second the remaining structures of the margins of the wound. (8) Drainage in such cases is unnecessary, and should be dispensed with.—*Medical Progress.*

MEDICINE.

THE TREATMENT OF INSOMNIA.

Dr. Joseph Collins, of New York, in an interesting article on insomnia, published in the *Journal of Nervous and Mental Diseases*, contrasts the action of chloralamid and sulfonal in the treatment of insomnia, and arrives at the following conclusions:

1. Chloralamid is a safe and one of the most reliable hypnotics.

2 It is not ordinarily followed by distressing after-symptoms, particularly headache.

3. It is especially valuable as a hypnotic where pain is a prominent factor, but not violent.

4. In cases of insomnia, where there is excessive activity of the brain, it is also useful.

5. On account of its stimulating activity on the respiratory function, it is the hypnotic *par excellence* in nervous exhaustion, associated with an asthenic condition of respiration and symptom complex indirectly dependent on this, brought about by defective oxidation and the formation of unstable chemical compounds in the system.

6. On account of its very slight action in depressing the circulation, it can be given in diseases associated with a weak heart, with greater safety than most of the other

hypnotics, not excepting chloral itself.

7. It is conveniently administered in the shape of an elixir, and this overcomes the need of dissolving it.

8. Its dose is from one to three scruples, administered one hour before sleep is desired, and this should not be repeated within two hours, for occasionally the action of the drug is delayed.

Sulfonal is preferred when we wish to get very rapid action. It should be given dissolved in boiling water, taken as hot as possible. In this way it is at once absorbed, sleep frequently occurring in from fifteen to twenty minutes. The disadvantages of sulfonal are that the patient is liable to form the sulfonal habit, and that its effects last through part of the following day.—*West. Med. Reporter,* Oct. 1892.

MASSAGE.

The clinical results obtained by massage are as follows:

In simple contusions, it brings about the rapid disappearance of divers disturbances, especially pain.

In contusions of the joints, it dissipates the muscular reflex contractures or the pareses, but above all it prevents obstinate amyotrophy which is the most serious of complications.

Applied to sprains, it is remarkable for the rapidity of its good effects; the looked for result is obtained in three or four days.

In dislocations, recourse must be had to it as soon as the reduction is assured, as it reduces, in the shortest time the swelling, ecchymosis, and pain; it arouses the muscular fiber from that local stupor into which it is plunged by the traumatism, and it prevents atrophy and lingering stiffness.

Applied to juxta-articular fractures, it soon subdues both pain and swelling; if recourse is had to it after the removal of apparatuses, it limbers up the parts and dissipates the œdema. A simple fracture, without deformation of the lower end of the radius, is cured in a fortnight; whereas, at least, forty days are necessary when immobilization with plaster dressings is resorted to.

Against *acquired aymotrophy*, massage shows itself powerless; if applied in the earliest stages, it may prevent the further progress of the affection.

The clinical conclusions are based on the histological results; a wounded muscle to which massage is not applied presents a diffuse sclerosis, with hypertrophy of the adjoining connective tissue in the various parts, interstitial hæmorrhage, engorgement of bloodvessels, and hypertrophy of their outer coat; whereas a wounded muscle, treated with massage, offers a normal histology. This is *restitutio ad integrum.*

The bloodvessels are normal in the muscles to which massage has been applied; in the muscle not so treated, they present a hyperplasia of the external tunic. The nerve filaments, normal in the muscle to which massage has been applied, shows signs of perineuritis and interstitial neuritis in the muscle not treated with massage.

The lesion of the nerves is more marked than that of the bloodvessels.

Upon the whole, according to the researches made by the author, it is proven, *de visu*, that massage acts by deterging a part of the variously noxious substances which the traumatism has introduced, by bringing the affected part back to its normal state and by preventing the process of diffuse sclerosis which would otherwise result.—*Merck's Bulletin.*

HYGIENE.

WATER FOR BABES.

A physician of New York Nursery and Child's Hospital believes, from his practice, that infants generally, whether brought up at the breast or artificially, are not supplied with sufficient water, the fluid portion of their food, being quickly taken up, leaving the solid too thick to be easily digested, In warm, dry weather, healthy babies will take water every hour with advantage, and their frequent fretfulness and rise of temperature is often directly due to their not having it. A free supply of water, and restricting the frequency of nursing, has been found at the nursery to be a most effectual check in cases of incipient fever, a diminished rate of mortality and marked reduction in the number of gastric and intestinal complaints being attributed to this cause. In teeth cutting, the water softens the gums, and frequently stops the fretting and restlessness universal in children at this period.—*American Analyst.*

PURIFYING WATER.

Dr. Daremberg, writing in *La Med. Moderne* concerning the means of rendering a cholera-infected water innocuous, says that this end may be accomplished in one of three ways, viz., by filtering, by boiling, or by the addition of some chemical substance which will destroy the germs of the disease. The first of these methods is, as a rule, ineffective, and can be relied on only when every detail is most scrupulously attended to. The second is effective but troublesome, and cannot always be carried out, fire and a suitable vessel for boiling being indispensable. The third method is one which, he says, is equally effective with boiling, and which can be carried out anywhere and at any time. The purification of water has been effected through the addition of alum, but the author prefers the acidulation of the water, especially in the case of possible cholera infection. Citric acid may be added to the water in the proportion of sixty to eighty centigrammes to the litre. This method is inexpensive, does not impart any unpleasant taste or odor to the water, and can be done anywhere without the need of cumbersome or delicate apparatus. In place of citric acid, tartaric or hydrochloric acid may be used, if desired.—*N. Y. Med. Record.*

NEWS AND MISCELLANY.

A PAINFUL INCIDENT.

A correspondent of the Vienna *Abendblatt* is responsible for the following statement: One morning the medical superintendent of a large lunatic asylum requested an attendant to hand him a pair of scissors. Perceiving something unusual in the aspect and demeanor of his chief, the attention of one of the physicians was drawn to the circumstance, when he was both surprised and alarmed by the announcement from the lips of the superintendent that it was his intention to open the skulls of some of his patients in order to ascertain the exact condition of their cerebral development. It thus became evident that the brain which had been for so long responsible for the medical oversight of the afflicted inmates of his asylum had itself become deranged, a circumstance not unique in the history of neurological research.—*Lancet.*

GOOD BEDSIDE MANNERS.

The day has not disappeared far in the past, in fact, has not altogether disappeared when a good bedside manner was the great requisite for success. If the doctor was gentle to the women, and attractive to the children, his success was assured. This is true to a certain extent today, but it is disappearing at the approach of the dazzling light of modern research. The coming physician is the one who will demonstrate his ability to combat disease. The man who can prove by actual demonstration that he understands the *antitoxines* is the one who is coming to the front. An American surgeon of to-day who has astonished a world by his statistics, astonishes alike all those who see how easily he operates without display and with scarcely a handful of instruments. But his patients recover. We would not underrate the value of a good bedside manner; but the scholar is coming to the front. Brains are at a premium.—*National Med. Review.*

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY FROM NOVEMBER 6, 1892, TO NOVEMBER 12, 1892.

Leave of absence for four (4) months, with permission to apply for an extension of two months is granted Major Justus M. Brown, Surgeon, U. S. Army.

Captain Eugene L. Swift, Assistant Surgeon, U. S. Army, is granted leave of absence for one month, to take effect upon expiration of present sick leave.

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Original Articles.

PURPURA FULMINANS IN CHILDREN.*

By CLARA T. DERCUM, M. D.,
PHILADELPHIA.

Purpura was first described by Werlhof, in 1775,and is known as Morbus Maculosis Werlhofi, or Werlhof's disease. The mild forms of this affection are known as Purpura Simplex, and the more severe forms as Purpura Hæmorrhagica. When, together with other phenomena, effusions of blood into the serous membranes of the joints occur, it is known as Purpura Rheumatica. Another form of purpura, the subject of this paper, which is as a rule rapidly fatal, was described by Henoch under the name of "Purpura Fulminans," and by Hervé as "Purpura Fondroyant," so as to express more fully the overwhelming action of this form of purpura upon the system and its almost hopeless termination.

Scarcely any reference is made in our text-books to this fulminant variety of purpura, although, in looking over the literature of the disease, which is extremely rich, I found many interesting cases recorded by American, German, French, English, Italian and Scandinavian authors.

The prodromal symptoms of all forms of purpura are generally those of malaise, with chilly sensations and a slight rise of temperature; however, the disease may be ushered in suddenly without any initial symptoms. The characteristic phenomena of this affection are the hæmorrhages which take place into the sub-cutaneous tissues, the serous cavities, the joints, the internal organs and from the mucous membranes.

*Read before the Alumnæ Association of the Woman's Medical College of Pennsylvania, May 11,1892.

In connection with the case of which I have made notes I have collected a number of others, and shall briefly report them, limiting myself, with one exception, to the cases as they occur in childhood. Some of the cases were recorded as early as 1858, before the different forms of purpura had been as clearly classified as they are now, but from the symptoms and termination, I would consider them as belonging to the fulminant variety.

Case I. On February 11, 1892, I was hastily called to see a child whom the father reported as probably dying. Their family physician, a homeopath, had been sent for, but the father was afraid the little one would die before his arrival. Upon reaching the house, the patient, a boy, four years old, was found in articulo mortis. The following conditions were noted: The face was drawn and wore an anxious, restless, distressed expression, it was so white that it could scarcely be distinguished from the pillow upon which the head rested, the lips, tongue, pharynx and buccal membranes were almost as white as the skin. There was marked retraction of the supra- and infra-clavical spaces, of the supra-sternal and epigastric regions, also of the intercostal spaces. The respirations were hurried and gasping, in fact, the appearance of the child suggested what the Germans call "luft-hunger." The pulse was rapid and thready, but not irregular. The mind was perfectly clear. The mother drew my attention to a condition which I had never seen before; the whole left leg from the knee to the toes was of a dark, uniform, blue-black color; the right thigh in its entire circumference, from the knee to the groin, was of the same dark hue; a purpuric patch about the size of a silver quarter of a dollar was also seen on the outer side of the middle of the right leg. The skin felt cold and slightly infiltrated in the purpuric areas. The

hæmorrhages must have been enormous as not a patch of normal skin was visible in the whole extent of surface described. The conditions indicated that gangrene must have supervened had the child survived. The little one died forty-five minutes after it was seen. No treatment was instituted other than a little whisky administered every few minutes.

A few days after the death of the child the following history was obtained from the mother: L. W., aged four years, American of German and English parentage. Surroundings hygienic, clothing and food good, nervous temperament, had never been a very robust child. During the night of Feb. 3d, he complained of feeling sick, shortly after this he vomited, a bowel movement quickly followed, a faint scarlet rash was observed on the trunk, the throat was slightly sore and the glands on both sides of the neck were somewhat enlarged; however, no subsequent desquamation followed, and at no time did he seem seriously ill, only very weak; he had not been confined to bed, but was dressed and allowed to play in a room. On the morning of the eleventh, while dressing him, the mother noticed that he was extremely pale and apparently very feeble, she also observed a patch of purpura, about the size of his own hand, on the outer side of his right thigh. Becoming alarmed at this discovery she sent for the doctor, who made light of it and told her to wrap the thigh in cloth saturated with sweet oil and lime water. The child was then dressed and brought down stairs and placed in a little chair, where he remained all day refusing to eat or play, but otherwise he did not complain. At ten a. m., while attending to the dressiug, the mother noticed that the patch on the thigh was increasing in size and that another one, about the size of a cent, had appeared on the outer side of the left leg. During the day these patches of purpura steadily increased in size until at nine p. m. they had covered the areas described. Slight epistaxis occurred in the afternoon, with this exception there were no hæmorrhages from any of the mucous membranes.

The character of the affection which preceded the purpura cannot, from the symptoms, be determined with any degree of certainty. This case occurred during the epidemic of influenza, a fact which must also be considered. It might be well to mention that two brothers of the child, aged respectively ten and thirteen years, had fever with sore throat, but no rash, during the period of the child's illness.

Case II. (Butler, *Buffalo Med. Jour.*, 1858–'59, xiv, 592.) A brawny eruption observed early in January between the shoulders. On January 15th, the same eruption, scarlet in appearance and inclined to bleed, appeared on the neck. On January 20th, large bruises were noticed on both sides of the head and occiput, these were attributed to a fall from the bed; however, closer inspection of the child revealed small purpuric spots on the extremities. No hæmorrhage from the mucous membranes. Death occurred on the fourth day after the discovery of the purpura. Autopsy revealed the kidneys congested but all the other organs anæmic.

Case III. (Zuelschaur, *Klin., Wchnsch., Berlin*, 1869, vi, 176.) Girl, aged two years of good health, whose surroundings were unhygienic and dwelling damp. Vomiting and diarrhœa suddenly set in after a few hours of restlessness and fever purpuric patches appeared simultaneously upon the face, back and nates; no hæmorrhages from the mucous membranes. Death in less than twenty-four hours.

Case IV. (*Ibid.*). Girl, two and a half years old of delicate health, whose surroundings where hygienic with the exception of a damp dwelling, and whose parents were healthy. She had suffered from three or four attacks of pneumonia since birth, and a bronchitis directly preceded the outbreak of purpura; she was taken sick suddenly at night with vomiting and purging. When she was seen at seven a. m. her face was extremely pale with a dark red patch on her chin; smaller spots were observed on her cheeks, neck, breast, back, abdomen, legs and thighs. Her pulse was rapid and her respiration hurried and gasping. No hæmorrhages from the mucous membranes. Death occurred at eleven a. m. of the same day.

Case V. (Appenrodt, *Med. Wchnsch.*, 1876, 11, 439.) Child, one year old, was attacked with gastro-enteritis on the fourteenth of August; purpuric spots were noticed on the twenty-fifth of August; these continued to appear until the fifth of September. No hæmorrhages from the mucous membranes. The child was extremely ill, but recovered in three weeks.

Case IV. (*Ibid.*). Child, nine months

old. Previous history; had whooping cough at two weeks of age, the disease ran its course in fifteen weeks and was followed by recovery. At nine months of age it was well nourished, although the mother stated that it suffered from "inward spasms." One day hæmorrhages suddenly occurred from the nose and stomach, these were quickly followed by the appearance of purpuric spots which rapidly spread over the trunk, extremities, pharynx and buccal mucous membrane. Death on the fourth day. Autopsy negative.

Case VII. (Ström, *Eira Göteborg*, 1887, xi, 136). A child, two and a half years old, was seized with purpura a few days after recovery from scarlatina. There was œdema of one leg with pain, bloody mucous discharge from the nose, albumen in urine, pulse weak. Gangrene of legs ensued and death occurred on the third day.

Case VIII. (Arctänder, *Hosp. Tid. Kjobenth*, 1887, 3 R. V. 227–229). Child, four years old. Purpura suddenly appeared on one leg, and then on the other one, it spread rapidly until large surfaces were covered; the legs were cold, swollen, and tender to the touch. Intense thirst and restlessness prevailed. Effusions of blood occurred into the superficial layers of the skin forming large bullæ. There were no hæmorrhages from the mucous membranes or albumen in the urine. Death on the third day of the disease. The character of the lesions before death indicated that gangrene would have supervened had the child lived.

Case IX. (Henoch, *Prag. Med. Wchnsch.*, 1886, iv.) Boy, five years old, was attacked Oct. 4th, by a frank pneumonia, which involved the base of the left lung. Ten days later he complained of pain in the left leg. This was quickly followed by the appearance of large and purpuric patches which rapidly increased in size and became confluent so that in a short time the whole body was of a blue black color. No hæmorrhages from the mucous membranes. Death in thirty-six hours.

Case X. (*Ibid.*). Girl, two and a half years old. A few weeks after recovery from scarlatina large purpuric patches suddenly appeared on her legs, they spread rapidly and became confluent so that in a few hours the whole body was a dark blue color, and large bullæ were seen on the surface. No hæmorrhages from the mucous membranes. Death in seven hours.

Case XI. (Jackson, *Archives of Pediatrics*, 1890, vii). Male, five years old, whose previous health and hygienic surroundings were good, had had a mild attack of measels in the latter part of May. On June 10th, he becames peevish and fretful and continued so until the thirteenth when small hæmorrhagic spots were observed on his back and extremities. Hæmorrhages suddenly occurred from the nose, stomach, bladder and bowels, which were so profuse that, to use the author's expression, the room was literally covered with blood. Death on the fourth day.

Case XII. (Collie, *Lancet*, London, 1891, 1). Male, aged nine years. Three weeks after an attack of scarlatina large purpuric spots appeared on arms and legs, they continued to increase in size until large surfaces were involved. The face was pale and pinched, the mind clear and distressed. No hæmorrhages from the mucous membranes. Death in forty-eight hours. Rigor-mortis marked. No hæmorrhagic patches found in any of the internal organs; there was intense anæmia of the heart, lungs, liver, spleen, intestines and kidney. The fluids in the ventricles of the brain, pericardium, pleura and peritoneum were clear. Hæmorrhages into the subcutaneous tissue only.

Case XIII. Herve, *Rev. Mens. de mal de l'enfance*, 1888, vi, 170–172.) Infant, three months old. Poor surroundings; peevish and fretful for twenty-four hours, when hæmorrhagic patches, the size of a dime, were observed on the abdomen and extremities, they rapidly increased in size and number. The face was pale and anxious, the respiration frequent and the pulse rapid. No hæmorrhages from the mucous membranes. Death in nine hours.

Case XIV. (Rinonapoli, *Archiv. itat. di pediat Napoli.*, vii. 92-95). Child, two and a half years old. A patch of purpura about the size of a quarter of a dollar, suddenly appeared below the left buttock after a short period of malaise. A closer examination revealed quite a number of petechiæ covering the surface of the body; they increased rapidly in size. No hæmorrhages from the mucous membranes. No sugar or albumen in the urine. Death on the third day.

Case XV. (Gibbons, *Med. Times and*

Gazette, London, 1885, 1. 2. 5.) Boy, three years old, suffered from chronic enteritis for one year previous to his death, and in consequence thereof had been kept on the most careful diet, when suddenly a large bruise appeared on the sacrum and on the inner side of each knee. No petechiæ present. A violent hæmorrhage from the stomach and a profuse epistaxis caused a fatal termination in a few hours. The mother discovered, just previous to the outbreak of purpura, that the cow, from which the child received its milk, had an abscess of the udder. The pus was noticed in the milk and the child was fed on other food.

Case XVI. (Lanneau, *New Orleans Med. and Surg. Jour.*, 1886, vii., N. S. xvi, 245, 249). Girl four years old, no prodromata. Purpuric spots first appeared on the leg, they rapidly increased in number until the body was covered. Severe pain was present. Bloody movements of bowels. No rise of temperature. Seriously ill for two weeks; recovery.

Case XVII. (Martin de Gimard, *France. Med.*, 1887, 11, 1557, 1569, 1581, 1593). Boy, eight years old. Purpura suddenly appeared without any initial symptoms. No hæmorrhage from the mucous membranes. Gangrene occurred in some portions of the body. Recovery after a protracted illness of months.

Case XVIII. (*Ibid.*). Boy, fourteen years old, had a severe hæmorrhage into the skin followed by gangrene. Death in four weeks. A micrococcus was obtained from pure cultures from the affected tissues of the body, which reproduced the disease in rabbits.

Case XIX. (Tizzoni and Giovannini, *Beitrage zur path. Anat. und Allgemeine Pathologie,* vi). Boy, aged four years, a strong, vigorous child had impetigo. On the tenth day of this disease he had a chill, his face became œdematous and a profuse hæmorrhage from one ear occurred. At the same time purpuric spots appeared upon the healthy skin and hæmorrhagic areas around the impetigo pustules. Urine deminished in amount, albumen and casts present. Hæmorrhages from the ears increased, and a blood tumor formed on the left side of the neck. Anorexia and vomiting. Death occurred on the fourteenth day after the appearance of the impetigo, and four days after the supervention of the purpura.

Case XX. (*Ibid.*). Girl, six years old, sister of the above case, slept in bed with her brother until three days before his death. Five days after the appearance of the disease in the brother, it manifested itself in the sister and spread rapidly; a week later she suffered from malaise which was followed by fever and successive chills; she vomited frequently and complained of pain in the epigastrium; her head, face, neck and hands were œdematous. Hæmorrhages occurred from her nose, ears, stomach and bowels, and a blood tumor appeared on the left side of her neck and upper part of her back. Death on the thirteenth day of the disease and on the fourth day after purpura showed itself.

It would be interesting to mention in connection with the above cases, that another child in the same family, a boy, nineteen months old, had impetigo a little later. The infections had been recognized by this time, and antiseptic washes and ointments fully used. Purpura did not supervene and the child convalesced rapidly.

Case XXI. (Hanot et Luzet, *Archiv. de Med. et d'Anat. Path.*, 1890, 11). A woman, near the end of her pregnancy, although she had been well up to that time, suddenly complained of trouble with her eyesight, and malaise. No attention was paid to this and she slept well the whole of the following night. Nevertheless, the next morning she quite unexpectedly became comatose, purpuric spots making their appearance at the same time. During the night following, her child was born dead, it was a full term baby and but little macerated. The mother died on the third day of the disease, without having regained consciousness. Autopsy on the mother, purpuric spots on the skin, confluent in some portions; heart pale, liver and spleen enlarged, more especially the liver, in which hæmorrhagic extravasations were also found, lungs and kidneys congested; uterus revealed nothing abnormal. On removing the skull cap, the dura mater was found intensely congested, also tense from the underlying liquid; the pia was also congested and its veins, gorged with blood; purulent liquid was discovered under the arachnoid. Brain adherent in patches to pia mater, no marked congestion of the brain substance present, however, there were three or four small clots of blood in each hemisphere. Autopsy on

the child: slight maceration, putrefaction not advanced, no purpuric patches on the skin. The fluids in the serous cavities were slightly tinged with blood without odor or flakes of fibrin. There were hæmorrhagic extravasations into the thymus, liver, heart, lungs and pleura. No lesions were observed in the spleen, stomach, intestines or peritoneum. The brain was soft and congested, no pus was present. A streptococcus was obtained from pure cultures from specimens taken from the mother and child which reproduced the disease in rabbits. Of late years investigations into the etiology of purpupa have been made by various French, German and Italian pathologists. Letzerich in a monograph (*Untersuchingen und Beobachtungen üeber die Aetiologie und die Kentnisse der Purpura*) and also in a subsequent paper (*Die Aetiologie und die Kentnisse der purpura nebst therapeutischen Bemerkungen. Zeitsch. fur Klin. Med., Leipzig, No. 5, W. O.*) gives most interesting results. This author has had six cases of purpura under his immediate care of which some recovered and some died. He succeeded in isolating a bacillus from pure cultures from these patients which when injected into rabbits caused purpura.

Letzerich divides purpura into acute, sub-acute and chronic forms. The inference is that by the acute he means the fulminant variety which is almost always fatal; sub-acute, purpura hæmorrhagica, which extends over a period of several weeks and which sometimes terminates in death but more often in recovery, and by chronic purpura, scorbutus, which several authors regard at the present day as purpura. While conducting his investigations Letzerich himself become infected with purpura in some unknown manner and had what he calls the sub-acute variety; he had three successive attacks all within one year each extending over a period of several weeks but each attack milder than the preceding one. During these attacks his liver increased rapidly in size and extended nearly to the crest of the ilium, a distinct enlargement of the spleen was noted. Hæmorrhages occurred from the pharynx, gums, nares, bronchial tubes and intestines. There were purpuric spots on the skin and buccal mucous membrane. He regards the liver as the breeding place of the bacilli on account of its enormous development. Blood obtained from the hæmorrhagic spots on the skin and buccal mucous membrane stained with methyl violet revealed the same bacillus obtained from the culture experiments. He also, in the three attacks from which he suffered, obtained pure cultures from the spots and reproduced purpura each time in rabbits. From the beginning to the end of an attack the bacillus does not always present the same morphological characters; he suggests that this may account for the various bacilli described by others investigators. He infers from his experiments that purpura in all its forms is due to this bacillus and that the different varieties of purpura depend upon the intensity of the poison and the resistance of the individual.

Very elaborate experiments have also been made in Bologna by Tizzoni und Giovannini (*Bakteriologische und experimentelle Untersuchungen ueber die hæmorhagischen Infection, Beitrage zur path. Anat. und Allgemeine Path.*, 1890). In their culture experiments from their cases of impetigo followed by purpura, they obtained the staphylococcus pyogenes aureus, a pus producing bacterium, and a bacillus that had not yet been described which reproduced the disease in the dog, rabbit and guinea pig but not in the pigeon or white mouse. In order to cause purpura in the animals mentioned the bacilli had to be injected into the subcutaneous tissue, no effect being produced when they were injected into the blood, stomach or serous cavities. They concluded that the children died of a mixed infection, impetigo upon which purpura supervened, the poison which produced the purpura finding its entrance into the system through the lesions produced by the impetigo.

Of the twenty cases reported six had no prodromata, one was preceded by malaise, two occurred during convalescence from pneumonia, three after attacks of scarlatina, one after measles, one after recovery from whooping cough, one during an attack of acute gastro-enteritis, one during the course of a chronic gastro-enteritis and two during attacks of impetigo. Three were followed by gangrene, of these two died and one recovered. Five cases were girls, eight were boys, and in seven the sex was not mentioned. Thirteen cases had hæmorrhages into the subcutaneous tissue only, seven had hæmorrhage both into the subcutaneous tissues and from the mucous

membranes. In three cases the hæmorrhages were most marked from the stomach, in two from the ear, in three from the bowels, and in the two from the nares, eleven of these cases died and three recovered.

INTESTINAL OBSTRUCTION.

By DR. S. N. WILEY,

NORRISTOWN, PA.

According to Dr. Hunter McGuire, "When a mechanical impediment to the passage of the contents of the bowel along the intestinal canal exists, the condition is known as intestinal obstruction."

The causes of this occurrence are numerous, the symptoms urgent, the diagnosis difficult, the treatment uncertain, and the termination, unless relieved by nature or art, speedily fatal. There is no class of cases to which the practitioner is called more important, or which demands on his part greater skill and judgment.

Most authorities agree in dividing the causes of obstruction of the bowels into two great classes—acute and chronic.

In acute cases the attack is sudden, the symptoms violent, and unless the cause is speedily removed, life ends in a few hours, or at most in a few days.

In chronic cases the causes act comparatively more slowly, the symptoms are chronic or less urgent, and the danger of death less imminent. In this class the cause is not uncommonly spontaneously relieved, and the individual restored to health without the aid of medicine or the surgeon's art. This result sometimes happens in apparently the most desperate cases.

This classification of acute and chronic obstruction is necessary for a proper clinical study of the subject, but it should be noted that in practice there will be found some cases which partake of many of the symptoms of both acute and chronic obstruction, making it difficult to determine to which division the class properly belongs. It may also occur that some, at first, well marked acute cases, subside and become chronic in character, also a chronic case sometimes changes its nature and becomes acute.

* Read before Montgomery Co. Medical Society, November 2, 1892.

As a rule the conditions which produce symptoms of acute obstruction are:

Congenital malformations.

Impaction of foreign bodies.

Twisting of the bowel—volvulus.

Internal strangulation by loops, bands, false membranes, diverticula, mesenteric pouches, slipping of a portion of the bowel into natural or unnatural openings, etc., and

Invagination.

And as a rule the causes which produce symptoms of chronic obstruction are:

Constipation and fæcal accumulation.

Stricture of the bowel.

Compression of the bowel from abdominal tumors.

Contraction of the bowel from inflammatory changes, often tuberculous.

The statement was recently made before the society of a neighboring county that cases of intestinal obstruction averaged one to each practitioner during a lifetime. But an examination of some statistics would seem to prove otherwise.

Leichtenstern—Ziemssen, vol. 8—shows that external hernia and malignant tumor being excluded one death from intestinal obstruction takes place in every 300 to 500 deaths from all causes in hospital practice.

Hilton Fagge has shown from an examination of the records of 4,000 autopsies in Guy's hospital that fifty-four, or about a quarter of one per cent. were cases of intestinal obstruction.

Heusner from his own investigations maintains that annually out of every 100,000 individuals from five to ten suffer from this affection, and that one to every 300 to 500 deaths is due to this cause.

According to the mortuary records of England an average of one death from this cause is seen in every 260. Brinton reports one death in every 280. His statement is based on 12,000 promiscuous autopsis.

According to these statistics one death, at least occurs in Norristown each year. This number does not seem large, yet if this one should be from the family of any one of us, it would still be too large.

The symptoms which characterize acute obstruction are generally of a most severe nature, they are more or less sudden in their appearance, and they bear a close resemblance to those which denote the existence of a strangulation in hernia. The

individual may be in the most perfect health at the moment of their occurrence, or he may have been more or less unwell, although still able to attend to his accustomed business. The disease is usually ushered in by a pain in a particular portion of the abdomen, of a sickening, griping, colicky character, and soon followed by a decided nausea, and a sense of constriction in the situation of the strangulation. Prostration is an early symptom. The vital powers are depressed, as if the system had received a violent shock. Great restlessness exists. The patient is in great agony, tosses about in bed, his thirst is intense, his mental distress is equally great, and if old enough he is conscious of his danger, and is anxious and despondent. The vomiting increases in frequency, and the ejected matter consisting at first simply of ingesta or of bile and mucus, at length becomes stercoraceous; the abdomen is sensitive, so much so that the slightest pressure is almost intolerable; the bowels are tympanitic and obstinately constipated, the lower limbs are retracted to take off the weight and pressure of the abdominal muscles, the pulse is small, frequent and wiry; the features are pinched; the extremities are cold; often the mind wanders; the suffering is intense. And unless relief is speedily procured the patient dies, either from exhaustion or mortification of the bowel. The period at which this event occurs varies. It may be a few hours, it never is beyond a few days.

In chronic obstruction the symptoms are much less violent, than those that mark an acute attack. Their development is gradual. The chief trouble at first is constipation, with rumbling noises and frequent eructations, disordered appetite, more or less torpor of the liver, and progressive failure of the strength. Colicky pains are occasionally experienced, defecation is performed with much difficulty, and is accompanied with straining and tenesmus. After the case has proceeded in this manner for a variable period, it gradually or suddenly assumes a more serious character, evidently depending upon the occurrence of inflammation, which never fails to mark the close of the affection, whatever may be the nature of the exciting cause. From this out the case rapidly assumes the form of an acute attack.

A consideration of external hernia, is of course, not included in this paper, but it is a rule as old as it is important—always to make a careful examination of the different points at which hernia may occur in every patient who presents symptoms of intestinal obstruction.

The diagnosis of intestinal obstruction is always determined with difficulty—except when it depends upon disease of the rectum low down, or some foreign body known to have been swallowed, but not passed. In almost all other cases it must of necessity be obscure.

In the limited scope of this paper I shall not attempt a differential diagnosis—but refer you to any of the many good works on surgery, in most of which are found some valuable diagnostic hints.

What shall we do when confronted with this most grave and dangerous affection—for grave and dangerous it is, as all who have seen it must testify. There are few conditions of the body which cause the practitioner more anxiety and embarrassment than cases of intestinal obstruction, and when the precise seat and nature of the occlusion is not known, the treatment is almost entirely empirical.

The distinction, however, between acute and chronic cases, or of acute supervening upon chronic symptoms, can almost always be made, and a patient investigation of the history of the case, the mode of invasion, and a rigid analysis of all the symptoms presented will generally enable the attendant to come to some positive conclusions as to the cause of the occlusion. One fact in the treatment which cannot be too strongly impressed upon the mind, is not to use purgatives and irritant enemeta, formerly so much in vogue—in the hope of forcing a passage through the occluded bowel.

The patient is urgently solicitous for medicine which will open his bowels, but the use of purgatives to overcome intestinal strangulation is as senseless and hurtful as when used to overcome the constipation of external strangulated hernia. These agents only add to the nausea, vomiting, pain and peristalsis. The latter is often violent enough already to render coils of the intestine visible, and with every paroxysm may be adding to the entanglement and impermeability.

It is said that cathartics in some instances have unlocked the bowel in intestinal obstruction; these cases must be

exceptional and many of them were probably functional and not structural in character.

The great medicinal remedy in intestinal obstruction is *opium*—in small and repeated doses. Its use arrests the vomiting, stops the pain, and quiets the violent movements of the bowels. Very often by it the intestine is preserved and the life of the patient saved. No special dose can be prescribed, it should be administered until vomiting ceases and the pain is under control. Small doses of morphia given hypodermically, and quickly repeated is the best plan of exhibiting it. If for any reason its hypodermic use is impracticable, it had better be given by the rectum, for if given by the stomach it is apt to be rejected, or if retained, absorption goes on slowly or not at all. Opium lessens the danger of death by collapse; it gives nature an opportunity to untwist the gut in volvulus, or to unroll it in intussusception, or to cut off the invaginated part in gangrene; and internal hernia, morbid adhesions, strangulation by bands of lymph, stricture and other forms of obstruction, it diminishes violent peristaltic action, postpones inflammatory infiltration, fixation of the strangulated portion and keeps the parts in better condition for operative interference, which in many cases affords the only hope of relief.

To carry it further than slight narcosis and arrest of the most painful symptoms is an abuse of the remedy. By such abuse the symptoms will be masked and both patient and physician deceived.

When obstruction is due to fæcal impaction, or spasm, the opium treatment is often indicated. Not infrequently after pain and vomiting are relieved and slight narcosis is kept up for some hours, the bowels relax and spontaneous evacuation takes place. If not, discharge of the contents of the bowel should be assisted by the administration of castor oil, or calomel and soda in divided doses, or repeated enemeta of warm water.

These agents should be used, however, as long as there is pain, tenderness of the belly, or any evidence of peritonitis; but the opium treatment should be continued until all signs of inflammation have disappeared.

The local application of ice to the abdomen has been recommended; it is claimed by some that the danger of general peritonitis is lessened, and that strangulation itself has disappeared under the use of cold. In some cases the local application of heat will give a grateful sense of relief to the sufferer.

Abdominal taxis or massage has been recommended. It has been attempted while the patient was in a warm bath or under the influence of chloroform; but when the cause and the nature and the site of the disease are unknown, this, in my judgment, is to say the least, a doubtful procedure.

The injection of large quantities of warm water into the bowels to overcome obstruction should never be omitted before resorting to operative interference. This plan has been known to succeed after other measures had failed. In place of water the bowel may be inflated with air—as has been done with hydrogen gas. Senn reports a number of cases of rectal inflation with hydrogen gas, with good results, and no ill effects either immediate or remote. Care should be excised in the introduction of water, air or gas, as rupture of the intestine has taken place following their use.

Very decided relief may be given by irrigation of the stomach, by removing the contents of the stomach and intestines above the obstruction, but the danger incident to the employment of such a temporizing measure in acute obstruction lies in the fact that too much valuable time is lost before a curative treatment is adopted.

Patients suffering from acute obstruction should abstain from taking either food or drink,—as digestion and absorption are almost if not completely suspended—and the accumulation of fluids in the stomach and above the obstruction cannot fail to aggravate the symptoms. It exhausts the patient's strength, by causing persistent retching and vomiting; it is one of the causes which produce distension of the intestine; it favors fermentation and putrefactive changes and causes violent peristaltic action.

In cases of acute obstruction of the bowels from bands of lymph, diverticula, internal hernia, slipping of a portion of the gut into some opening, or twisting, when the treatment suggested has been faithfully tried and fails, the abdomen should be laid open, the cause of the obstruction should be carefully searched for,

and if possible removed.

I have been criticised for saying at the last meeting of this society that the patient suffering from acute intestinal obstruction, after proper medicinal means had been used for forty-eight hours and failed, should never be allowed to go longer without operative interference. I find that the most recent and reliable authorities agree that this should be the rule, while many claim that a few hours, at most one day, may be spent in trying medical means. After that time if the patient is not relieved, the sooner abdominal section is resorted to the better the chance to save life.

Acute internal strangulation of the bowel has the same symptoms, course and termination that acute external hernia has. It demands the same treatment—removal of the cause of the constriction. Delay in performing the operation in the former is as certain to be followed by peritonitis, gangrene and death as in the latter, and the medical attendant who hesitates to open the abdomen—or have it done and an attempt made to remove the constriction in case of acute obstruction—after a fair trial and failure of medicinal means, is as culpable as the one who delays the operation of herniotomy for unrelieved strangulated hernia. Senn says: "To let a patient die of the consequences of a removable cause of obstruction without an operation is a reflection upon the advances of modern aggressive surgery. Even should spontaneous recovery take place, or recovery after medicinal treatment, this does not insure immunity from future attacks."

The individual whose case I reported at our last meeting has suffered three attacks since the first of this year, from each of which he has narrowly escaped with his life, and now lives in daily dread of a return of his old enemy. Another patient in Norristown is reported to me, who has suffered from four violent attacks. The fact that these patients recovered, in the past is no evidence that they will do so in the future; while the fact that they have suffered repeated attacks would seem to indicate that there is some structural change.

To my knowledge within the past month one patient died in our community, in which the autopsy showed that life could have been saved by an operation. Another died in which no autopsy was made, hence it can never be known but that this life, too, might have been saved by surgical means.

As to the dangers of operative interference, I think I am safe in saying that we shall hear to-day that the danger of opening the abdominal cavity under proper precautions is so slight that patients suffering from ovarian tumors are encouraged to have them removed as soon as their presence can be diagnosticated, at a time when the general health remains unimpaired. The mortality following abdominal section for acute intestinal obstruction will be reduced to that of other intra-peritoneal operations as soon as the importance of an early operation is recognized; before the patient's strength has been wasted by the disease, and before the parts involved in the operation have undergone irreparable structural changes.

A CASE OF OVARIAN PREGNANCY —LAPAROTOMY—CURE.

By EMORY LANPHEAR, M. D.,
SURGEON TO ALL SAINTS HOSPITAL, ETC., KANSAS CITY, MO.

Many a woman has gone to the grave with a diagnosis of "pelvic hæmatocele," "peritonitis," "pelvic cellulitis," etc., when the real cause of death was extra-uterine pregnancy. Fortunately we are rapidly coming to the conclusion that (1) extra-uterine pregnancy is quite frequent; (2) that it may be recognized in many cases; (3) that in modern surgical methods we have a comparatively safe cure. As for the question of "pelvic hæmatocele," from an observation of a number of cases, I am almost convinced that in nearly every instance the trouble is ruptured tubal pregnancy.

It is now pretty generally conceded that all fecundation takes place either in the tubes or on the surface of the ovary, and the wonder has been that ectopic gestation is as rare as generally believed. I do not think it is very rare—in fact, it is of quite common occurrence; but because of unfavorable environments, early death and abortion of the product of conception occur in a large proportion of cases.

Lawson Tait has claimed that all extra-uterine pregnancy is tubal; in opposition to this Franklin Townsend, of Albany, before the American Association of Obstet-

ricians and Gynæcologists, 1888, presented an elaborate essay (which met general approval), in which the assertion is made that "extra-uterine fœtation can and does occur either in the Fallopian tube (a frequent form), in the ovary, upon the ovary, or in the peritoneal cavity." That true ovarian pregnancy does take place is proven by the following case:

CASE.—Mrs. John W., age 42 years, patient of Dr. T. Brown, of Hamilton, Mo.; two children—one 18 years and one 14 years of age; pregnant four years ago, but miscarried at four months; never well since; menstruating too freely and suffering from retroversion. Last menstruation occurred the last of May, 1892; some symptoms of pregnancy. August 2, was taken with hæmorrhage from uterus, accompanied by excruciating pains in left ovarian region, the bleeding stopped, but pain continued, with great collapse, and the abdomen became distended to its limit. Temperature has ranged from 99½° to 102°. In the night of August 15, I first saw her and examined her under chloroform. The whole pelvis was filled with a boggy mass, the lower part of the abdomen very full and a lump the size of a large orange easily made out in the left ovarian region. I therefore felt convinced of the accuracy of Dr. Brown's diagnosis of ruptured tubal pregnancy, and advised operation. On the morning of August 16, assisted by Drs. T. Brown and W. T. Lindley, I made abdominal section, and removed about one and a half gallons of fluid and of clotted blood; the left ovary was found to be the seat of pregnancy, its tube being whole and unaffected save the fimbriated extremity was bound down to the broad ligament by inflammatory action; to the ovary the placental attachment was plainly made out, and in its ruptured envelop the dead fœtus. A clamp was applied, and the broad ligament transfixed and tied with catgut, the tube, remnants of ovary and the baby cut away. The abdomen was then thoroughly irrigated with boiled hot water to the amount of about eight gallons, and the abdomen closed with catgut sutures, without drainage, with the usual dressings. Six hours later the temperature had dropped two degrees and the patient was free from pain for the first time in many days; but little shock. August 20, she was reported as free from pain, sleeping well and appetite returning; temperature normal and pulse 80. Recovery was uneventful, she being allowed to sit up in bed on the tenth day and to walk a little by the sixteenth.

Examinations of the specimen showed conclusively that this was a true ovarian pregnancy, the tube being as perfect as any I have ever seen, save at its extremity, as already mentioned.

The treatment usually advised for extra-uterine pregnancy is electricity, if a diagnosis has been made prior to rupture of the enveloping structures, the idea being to destroy the vitality of the impregnated ovum and allow its abortion. This I do not believe to be good treatment, for whenever pregnancy is sufficiently advanced to allow even a provisional diagnosis, the mass is already so large that it can only remain, and remaining be a constant menace to the life of the patient; for no woman with such a foreign body in the pelvis can be for one moment free from danger. Fatal inflammation is likely to be set up at any time, even years afterwards. And if a wrong diagnosis has been made, incalculable mischief may be done by the electric current; whereas, as Wathen says, "We find nothing against the knife, except that it is a surgical operation. No case of death has ever been reported as due to the knife. If a mistake in diagnosis has been made, no harm has been done, as the disease, whatever it is, will require the knife anyway." And, I may add, if the condition happens to be such that nothing has to be removed, exploratory laparotomy is an almost absolutely safe operation in clean and skilled hands; I have opened many bellies for exploration, and have never seen a symptom follow to cause regret. So I will say that whenever ectopic pregnancy is suspected, laparotomy is indicated, and urgently.

All authorities unite in advising abdominal section whenever rupture has occurred. That the operation may be done even a week or two after the accident is proven by the case here reported. But as a rule it may be said the earlier the surgical interference the better.

Clinical Lectures.

OSTEOCLASIS.*

BY PROFESSOR GRATTAN, M. D.
DUBLIN, IRELAND.

Professor Grattan was introduced to the class by Professor Sayre who stated that the distinguished visitor while in New York had consented to give a surgical clinic illustrating the operation of his instrument known as the "Grattan Osteoclast." Professor Grattan exhibited an instrument devised by himself for the purpose of fracturing the bones, particularly of the lower extremities, without resorting to compound fracture by the chisel and mallet. Hitherto it has been the custom in operating for the cure of "bow-legs" to first make an incision exposing the bone and then by a chisel cut part way through the bone which is then, by the application of force, fractured. This operation is attended with many dangers. First, we have the evils attendant on a compound fracture; second, a liability to septic infection; and third, the possibility of a fat

*Delivered at Bellevue Hospital, New York City, under the service of Professor Lewis A. Sayre.

embolus resulting from disintegration of the bone medullary substance. The "Osteoclast" is intended to overcome all these dangers. By it the soft tissues are not opened, the periosteum of the bone is not ruptured and the medullary substance is not disturbed. In operation it is extremely simple and the bone can be broken at any point desired. The instrument consists of two smooth, curved, parallel rods bent so as to encircle one-half the limb. These rods or arms are so arranged that by a screw they may be separated or brought together at will. By their straight end they are inserted into a plate through the upper part of which works a powerful screw. This screw points toward the curved arms and when the instrument is in operation the end of the screw plays in a wedge-shaped piece of steel that is placed against that portion of the limb that is required to be fractured. It is thus seen that the limb is between the curved arms of the instrument on one side and the wedge of steel on the other, and that by the screw this wedge can be forcibly brought to bear upon the bone and thus fracture it. To illustrate the *modus operandi* of the instrument a patient was brought before the students for operation. The patient, a girl, was seventeen years of age and of robust health excepting a deformity of the left thigh. This deformity consisted of a curving of the femur in its lower third. It existed from childhood and as she progressed in age and stature the deformity became more pronounced. At the time of the operation this left leg, due to the curve in the femur, was bent outward at an angle of seventy degrees. The patient being anæsthetized the "osteoclast" was applied to the limb at the point of deformity. The wedge was screwed slowly against the limb until the operator felt that two or three more turns of the screw would fracture the bone and then by making these last turns very quickly the bone was broken. After the removal of the instrument it was seen that, although great force was required to effect the fracture, the integument was not injured, and that it left the limb in a condition of simple fracture. The leg was now put up in a plaster of Paris cast, and when shown in the clinic two weeks after, was in a perfectly healthy condition—the patient having suffered no constitutional disturbances whatever.

Communications.

CROUP, DIPHTHERIA AND SCARLET FEVER.*

By F. LEONHARDI, M. D.,
DRESDEN, GER.

(*Continued from page 772.*)

During the epidemics of diphtheria the inflammation seen on the posterior fauces resembles often closely that which is seen in the initial stage of scarlet fever, thus often leading to mistakes in diagnosis, or named by some angina scarlatina sine exanthemata. But since the true specific bacillus of diphtheria has been found by Klebs and Lœffler, which is never present in scarlet fever, (in this latter one finds only cocci or streptococci), such mistakes cannot occur in the practice of the scientific physician. The comparison of the two diseases, however, still presents interesting points for further study.

The author's experience of Scarlet Fever dates as far back as the epidemic in 1843 at Leipsic, where he treated in private practice twenty-four cases, three of these ending fatally. During the years 1847 to 1856 he again had a series of seventeen cases, with three deaths—these belonged to the poorer classes. In private practice 1847 to 1892 he had 114 cases with eleven deaths, aside from these there were 120 treated at the Polyclinic. These, however, cannot be studied in their entirety since there are some discrepancies in the history.

The mortality of scarlet fever varies with the severity and gravity of the epidemic. The incubative period Leonhardi was able to observe in four cases with perfect certainty during the years 1872, 1875, 1884, 1889, and noted in each that it was five days. Prof. Cerutti in his lectures on special pathology (1843) also gives five days, while others Strumpell, Ziemssen, Thomas, etc., place the time from four to seven days. The natural course of Scarlatina is sudden in its onset with high temperature, marked increase in pulse rate, painful deglutition, redness of the fauces; vomiting may be present; appearance of rash either at end of first day or beginning of second. Fever either stationary or some increase up to third day together with

*Abstracted and translated for MEDICAL AND SURGICAL REPORTER by Marie B. Werner, M. D.

deepening in color and extension of the rash. A beginning decline of the fever on the fourth day until it reaches normal on the eighth or ninth day, the redness also gradually disappears and desquamation begins.

The description of this fever is quite similar to that found in uncomplicated (epidemics) of diphtheria, also of tonsillitis not due to scarlet fever, and not infrequently like some cases of non-suppurative erysipelas. The author's observations have led him to believe that when the thermometer registers in the first days 40°C. or more in the axilla, it is found chiefly in patients who have kept their skins active, promoting evaporation and perspiration, and that it was continued during the exanthematous stage. In these cases the desquamation period was satisfactory and unaccompanied by renal disturbance, the urine showed no albumen at any time during the daily examinations extending over three weeks. If the fauces and tonsils at first showed some whitish deposit and the tongue was thickly coated, they all disappeared promptly after the fever began to abate, so that at the end of the first week, tongue, fauces and tonsils presented a clean surface.

The treatment consisted in promoting the activity of the skin, by giving plenty of weak acid lemonade and tea from the linden blossom with milk. If the fever was high the following mixture was ordered: Sod. nitricum, Sod. bicarbonat. aa 2.5 to 4 grms., Aq. 180, Syr. Althea 20 grms. S. A dessertspoonful every two hours. Also a gargle consisting of lukewarm water holding in solution a small quantity either of Potass. chlor. or Sod. bicarbon.

In order to aid in lowering the mortality of scarlet fever it becomes important to begin in early life to promote a healthy action of the skin by regular baths followed by cooler douches. Undue exposure of arms and legs in children does not aid in this, but will harden the skin and reduce its functional activity, and children dressed in this manner are just as susceptible to catarrhal inflammations or enlarged glands; and the usual diseases of childhood are just as severe as in those whose blood is warmer.

In the irregular forms of scarlet fever the author noticed: First; coincident with the onset of the high fever there was congestion of the brain, unconsciousness and convulsions. Second; in other cases in which the fever was not high at the beginning and unaccompanied by the above named manifestations, it remained high beyond the stated time and even increased with the appearance of subsequent brain symptoms. The skin was harsh and dry and clearly was the cause of the hyperæmia of the rete malpighii. The author feels certain that in connection with the arrested function of the skin we have the beginning of hyperæmia of the inner organs, notably the kidneys. Third: The dangers of throat complications; this does not embrace the ordinary sore throat of scarlet fever, but considers such cases in which the poison has entered the deeper structures. Symptoms of this can be seen as early as the fourth or fifth day—are diphtheritic in character, coagulated necrosed tissue, gangrene, extension of inflammation into posterior nares, and mucous membrane of the nose, eustachian tube, middle ear, accompanied with lymphatic infiltration, about the neck and lower part of the jaw, with possible suppuration, septicæmia and pyæmia.

Of the seventeen deaths seen among one hundred and fifty-five scarlet fever cases three occurred in from two to four days. In ten cases death occurred between the fourth to ninth day, preceded by congestion of the brain, unconsciousness and cardiac paralysis. Four died after the second week due to renal complications.

Leonhardi has never shared the opinion of those who believe in the possibility of a mixed infection of scarlet fever and diphtheria, basing this diagnosis entirely upon the grave throat symptoms which are sometimes present in scarlet fever. The resemblance of symptoms objective and subjective can be explained by the absorption of infectious poisonous matter of scarlet fever. The author states further that he believes the tonsils and follicles in the pharynx offer a pregnant soil for certain germs and that is one of the principal mediums for infection of scarlet fever and explains to him the fact that persons exposed to the fever and who have previously had the fever often suffer from a more or less severe angina scarlatinosa sine exanthemata. In 1843 he saw two such cases which presented the complete picture of diphtheria; norash was present; thisappeared after exposure to scarlet fever. The elder

child made an uninterrupted recovery the youngest suffered from dyspnœa on the fifth day and was relieved by an emetic, which aided in expelling many shreds and an entire cast of the uvula the child recovered after fifteen days' illness. There is no doubt that those doubtful cases can easily give to those so disposed a bona fide attack of scarlet fever and cites a case which occurred in 1889, a child of five years had not left the house for two weeks owing to a cold and in consequence not come in contact with any person outside the family, she was suddenly taken ill with scarlet fever, it was found that the father had began to suffer five days previously from tonsilitis accompanied three days with fever, no rash. The child passed through a severe attack of scarlet fever lasting twenty-one days.

High temperature, congestion of the brain, unconsciousness and convulsions appearing in the early stages were treated by the old practitioners by local bloodletting at the temples or back of the ears; five to ten centigrams of calomel every hour or two, cold applications to the head. This has found favor with Leonhardi, who also uses baths when indicated, but speaks with greater satisfaction of the results gained by inunctions.

Hydrotherapy may be considered of value in grave cases to combat the excessive dryness of the integumental coverings to prevent a thickening of the epidermis and a consequent lack of proper exhalations. The patient is placed in a bath of 22° to 26° R. for five to eight minutes, giving cooled douches at the end of bath, in grave nerve symptoms they can be repeated two or three times daily. To this can be added the inunctions of fats two or three times daily, which the author believes to have diminished the number of renal complications. Internal medication consisted of acid muriát. dil. one to two grms. to aq. 150 to 180 grms., liberal internal use of water mixed with lemon, apple or raspberry juices.

English physicians recommended as a specific, in 1820, carbonate of ammonia, adding to this some camphor in case of cardiac failure. This will be found quite useful. In acute hæmorrhagic nephritis with diminished and concentrated urine, Leonhardi recommends first two to ten centigrams of calomel every two hours, followed by liq. potass. acetat., tartrate of soda, seltser water, with lemon juice or white wine. Even in profuse secretion of urine with albuminuria the vegetable acids will be of value so long as the urine is of an acid reaction. The mineral acids should be used when the urine is alkaline in reaction. In cases of heart failure camphor, ammonium preparations and musk will be found useful.

The severe throat complications of scarlet fever are best treated by the repeated injections in the mouth of a solution of alum or borax with potass. chl. honeyof roses and water. In addition to the lemonade and linden blossom tea the following mixture has been of service, nitrite of soda, bicarbonate of soda aa 2-r grms. aq., mucilage of acacia or syr. althea 200 grms. The treatment followed since 1863 to date has proved successful in all but four of seventy-one cases. One death was due to convulsions occurring on the ninth day. The other three caseswere first seen on the fourth day of the eruptive stage. So convinced is Leonhardi of the utility of the repeated local washings by injections and their beneficial results that he feels certain that Heubner of Leipzig has attained the last good results mainly by the use of his hourly lukewarm boric acid injections, rather than by his three per cent. carbolized injections into the tonsils.

A CLINICAL DESCRIPTION OF DYSENTERY AS IT OCCURS IN NICARAGUA.*

By JUDSON DALAND, M. D.

Three varieties of dysentery are met with in Nicaragua, namely, the malarial, the endemic, and the epidemic, and of these the malarial is by far the most common. The prodromal symptoms of malarial dysentery are malaise, pain in the back, in the head, and in the umbilical region extending toward the pubes. In association with the diarrhœa these pains are highly characteristic of this form of dysentery. Mild cases are marked by very slight febrile and circulatory disturbances; whereas in the more severe cases, we have a moderate elevation of temperature, varying between 102° and 104° F. The stools are at first composed almost entirely of pure mucus, are small in

*Read before Phila. Co. Med. Soc., October 26, 1892.

quantity, and are frequently attended by tenesmus; soon the mucus is streaked with blood. The pains are not usually severe during the act of defecation, but the pain in the head and back is excruciating. Liver complication are not infrequent, particularly acute hepatitis or acute hepatic engorgement, each of which is frequently associated with jaundice. Hepatic abscess is a rare complication and is usually secondary to the ulceration of the colon. At times the spleen becomes greatly engorged.

Changes in the urine, indicative of kidney disease, probably exist, but chemical and microscopical examinations are rarely made from lack of proper instruments and reagents. Many of these cases of malarial dysentery are followed by intense anæmia and debility, lasting for several months.

When cases are seen early and promptly treated, the prognosis is almost uniformly favorable, but when seen late they usually die. As post-mortem examinations are never permitted, no information exists regarding the morbid anatomy or pathology of this interesting disease. The amœba coli, if searched for, would be found in many of these cases.

The treatment found most successful by Dr. Bermudez, of Managua, Nicaragua, is as follows: To an adult is given six grains of quinine morning and evening, in conjunction with—

℞ Ammonium chloride.....gr. v.
Pulv. ipecac.....gr. v.
Tr. opii.....gtt. x-xv.
To be repeated every two hours.

The amount of laudanum is determined by the severity of the pain. When the pain is particularly severe and obstinate, morphine is superadded, and, in cases marked by debility, it is customary to substitute the carbonate for the chloride of ammonium in five-grain doses, every two hours, day and night.

In the way of food nothing is permitted except milk or milk and lime-water, to which sago may be added. The patient is allowed to drink freely of cool water, thus alleviating the intense thirst which is usually present. Ice-water is considered harmful.

The *second* variety, known as endemic dysentery, resembles the preceding, but is very much milder, and is usually unattended by the fever or the severe pains in the head, back, extremities, or abdomen that characterize the malarial form. The stools are composed of fæces mixed with mucus and blood; are less frequent, and the tormina and tenesmus are less severe.

The average duration of malarial dysentery is three weeks, but occasionally it has been known to last two months, while very mild cases run their course in two weeks.

The treatment for this variety is the same as for the malarial, with the exception that the quinine is omitted. Almost all cases recover, and complication or sequelæ are uncommon.

The *third* variety recognized is called epidemic dysentery, which, as a rule, comes on suddenly, with pains in the head, back, throat, and extremities, accompanied with severe abdominal pains, shooting in character and centering at or about the umbilicus. Headache is particularly complained of; and not infrequently nausea and the vomiting of bile are associated. From the first the discharges are bloody, frequent, and there is intense pain and tenesmus. There may be as many as one hundred and fifty evacuations in the twenty-four hours, and an ordinary case may average twenty-four in the twenty-four hours, or one hourly, day and night. The temperature is high, ranging from 104° to 106° F., with a morning remission of two degrees, at which time there may be moderate perspiration. Severe cases die in less than seven days, and favorable cases may recover in from two to three weeks.

The discharges from the intestines continue bloody throughout the disease, but change in color, becoming dark and sometimes black from decomposed blood-pigment, and frequently they are vicid and tenacious from admixture with mucus.

At times the patient becomes delirious, and occasionally coma supervenes. Children often develop twitching of the muscles, rolling of the eyes, and there is a tendency to bury the head in the pillow.

The complications usually noted are hepatitis, jaundice, and abscess of the liver. Usually so soon as hepatic complications occur the patient dies; in other cases epidemic dysentery is complicated by croupous pneumonia with rusty sputum, and it usually affects the base of the right lung. Now and then severe internal hæmorrhages occur, and such an accident explains the cause of sudden death which has been occasionally observed. In this form of dysentery the anæmia and debility

are more marked than in the malarial form, and is more persistent. Not infrequently the patient suffers from obstinate constipation, due to stricture resulting from the healing of large and deep ulcers in the colon.

The cases are best treated by the administration of from ten to twenty grains of quinine given three times daily, and in addition chloride of ammonium, five grains; pulverized ipecac, five grains; and tincture of opium, ten to fifteen drops, repeated every two hours. Frequently, however, there is so much gastric irritability that these remedies are not retained, and in such cases the quinine is continued, but the chloride of ammonium and ipecac mixture is omitted, and fifteen grains of bismuth or five grains of tannic acid, repeated every two hours, is substituted. When opium is indicated it is invariably administered in the form of the tincture, in doses of five to fifteen drops, repeated every two or three hours according to the severity of the case. At times nitrate of silver, in doses of one-sixth or one-eight of a grain in pill form, is given every three hours. If the astringents mentioned prove of no avail, recourse is had to the acetate of lead, in doses of two or three grains every three hours. Most cases require stimulants, and experience has shown that alcohol in the form of brandy or whisky is *inadvisable,* and that the best results are secured from the use of sherry, port, or any of the red or white wines, associated with the carbonate of ammonium, in ten-grain doses repeated every three hours.

The food is restricted to milk and lime-water, sago, and farina. Not infrequently Dr. Bermudez has seen as many as one hundred cases in two months with the mortality of but 2 per cent., and his father would probably see as many as two-hundred cases in the same length of time.

Dysentery is one of the most common diseases of Nicaragua, and typical examples of the disease may be seen any day in the year. Most cases of malarial dysentery are observed during December, January, and February, while the epidemic variety occurs more frequently during the months of March April, and May. Of course, endemic dysentery is always present, and, as would be naturally expected, is equally prevalent at all seasons. The malarial form prevails chiefly in low, marshy districts, during the hot months. It is well to remember that the dry season, which corresponds to our summer, begins in November and ends in April, the remaining months constituting the Nicaraguan winter, or wet season. The average maximum temperature in the dry season is from 95 to 98 degrees. There is a difference of at least ten degrees between the temperature of the day and that of the evening.

The contagiousness of epidemic dysentery is fully recognized, and all ordinary precautions are taken to prevent the spread of the disease. Isolation, the free use of carbolic acid, the burial of all discharges, especially fæcal and urinary; the burning of the linen soiled by the discharges; and in cases where the patient is too poor to submit to the destruction of clothing by burning, they are disinfected by boiling water.

In all of these cases no researches have been made regarding the presence of the amœba coli.

Nicaragua has excited much interest of late, particularly in view of the probability that in the near future the Nicaraguan canal will become a reality, which will bring it into intimate relations with the entire world. I have, therefore, ventured to record these observations regarding a disease which prevails constantly, and at times becomes contagious.

My thanks are due to my friend and student, Dr. Salvador Bermudez, and to his father, who has practised in Nicaragua for more than thirty-five years, for the description of dysentery as it appears in Nicaragua, and for the treatment which has given them the best results. The enormous experience of the physicians of Nicaragua has heretofore never been made known to the medical profession, in so much as they have no medical magazine to which they could report their observations; and, moreover, at no time has it been their custom to carefully note the cases under their care; so that this report is of particular value, and is, perhaps, the first of the kind published in the English language. It is especially worthy of note, that the greatest confidence is placed in the use of the chloride of ammonium, and that this is their uniform practice. I would, therefore, suggest that it be employed in the United States, especially in the Southern States, where the climate more nearly resembles that of Nicaragua.

ACUTE CEREBRAL MENINGITIS SUBSEQUENT TO SPONTANEOUS ABORTION.*

By H. A. ARNOLD, M. D.,
ARDMORE, PA.

A single case offered as the basis of an article presented for your consideration must possess features that are profitable, or at least unique, in order to merit such presentation.

The following is offered in the hope that it possesses these distinguishing qualities:

Mrs. J. B., twenty-two years of age, married, the mother of two children, presented herself at my office in May, 1891, suffering from onychia.

There was the customary history of insufficient and impoverished blood, debility, and loss of appetite that we usually find in these cases.

Under a suitable regimen, and the use of tonic-alterative treatment of a ferruginous character, she recovered her health perfectly, and remained so until August 8th, when she was "unwell" for a day or two.

On the evening of Saturday, August 15th, she suddenly began flooding, went to bed, and remained there until 10 o'clock the next morning.

Feeling well all day Sunday, she attended to her accustomed household duties, and on Monday morning did the family washing.

At 3 o'clock P. M. (Monday the 17th), she began flooding alarmingly. She did not know she was pregnant, and could not have been more than one and a half or two months.

The word brought me by the messenger, not being of a definite character, I did not go directly to the house, and on my arrival I found a neighboring physician extracting the last fragments of placenta.

The patient was pulseless, bloodless and collapsed.

I speedily gave her tincture of digitalis, m. xx, hypodermically, also one fluid drachm by the mouth, in conjunction with port wine, the only stimulant at hand.

Immediately after a hot douching with plain water, the pulse, which had begun to make its appearance at the wrist, failed again; she became unconscious, and while so, vomited portions of an undigested dinner, the dejecta being principally sugar corn and tomatoes.

Two succeeding attacks of nausea and vomiting relieved the stomach of the remainder of the dinner, and, after administering hourly doses of tincture of digitalis, m. x., I left her at 9 o'clock, P. M.

18th. No rest last night. General condition fairly good considering yesterday's experience. Urine passed at noon to-day; circulation improving, but still quite weak at times.

19th. Good rest last night; general improvement; slight headache; kidneys acting perfectly.

20th. Did not rest so well last night, but says, she "feels well enough to get up," only her head swims a little. Slight pain in vertex and occiput. Tires soon of conversation. At 8 o'clock, P. M., word reached me that she had had two convulsions. I found her with hot head and dry skin. Learned she had complained of feeling cold, and had a chill, followed by fever. Soon after my arrival she had a third convulsion. The eyes were frightfully congested, face flushed, head rolling from side to side, considerable muscular twitching, particularly of the forearm and hand. At frequent intervals she would give utterance to the piercing brain-cry, so diagnostic of meningeal trouble. The pupils were widely dilated; the expression vacant, indicating obliviousness to her surroundings.

After a hypodermic injection of morphia sulphate, grain, one-half, I gave her twenty grains of chloral hydrate, and directed ten grains to be given every hour, while not sleeping. I left her, at 10.30, P. M., resting quietly. A few minutes later she was aroused by a neighbor, who called to inquire as to her condition, and the hourly dose of chloral was administered.

21st. 8 A. M. Little, or no, rest last night. Delirious this morning rolling-head—eyes terribly swollen and reddened, head fiery hot and congested, skin dry and hot, and has a yellowish, waxy appearance,—pulse rapid and thready,—all the blood she has is seemingly in the brain—brain-cry almost constant—no response to questions.

I discontinued the chloral. *She has*

*Read before Norristown County Medical Society, November 2, 1892.

taken 170 grains in 17 hours. Ordered opium, grain one-half every two or three hours according to condition; bromide of potash, grain j every hour; magnesia sulphate one heaped teaspoonful; quinia sulphate, grains two every three hours, and blisters behind the ears.

I also cut off her hair, which was very thick and long and ordered ice to the entire head continually.

At 5 P. M. she was somewhat quieter—head not so hot—no movement of bowels yet—no discharge per vaginum; yet no significance is to be attached to this fact, as the uterus had been *entirely* emptied, and made aseptic by suitable douches, and nothing during the progress of the case gave indication of any trouble from this source.

At 8 P. M. she went into a sound sleep which lasted all night.

22nd. 8.30 A. M. She awoke this morning with consciousness greatly restored; answers questions but has no recollection of the events of the last few days; she realizes loss of hair, also the presence of blisters behind the ears. Pupils are normal in size—face not so flushed—head not so hot—skin slightly moist; no movement of the bowels as yet, even by enemata.

She now entered upon a convalescence which ended in complete recovery.

Now, as to the points of interest. This woman lost so much blood that she was practically exsanguine. In this anæmic condition, meningeal complications, in the nature of increased vascularity, would scarcely be deemed possible; and would tend to undermine the belief in the efficacy of depletion by vivisection, or other methods of blood-letting, should they occur.

When a school-girl, this patient struck her head while playing in a culvert. Following this injury, for several years she had mild seizures, apparently epileptiform in character. There is no cicatrix, cranial elevation or depression discernible to indicate the seat of injury, yet it may have some bearing on the case.

On the 17th, 18th and 19th, there were repeated attacks of cardiac weakness, with an extremely weak radial pulse; and yet on the 20th and 21st she took 170 grains of chloral hydrate in seventeen hours. The investigators, and men who write books do not strongly impress upon us the value of chloral as a heart tonic; and the depression of heart and respiration occasioned by it, would, I suppose, have been a contra-indication to its use. Nevertheless, my patient survived, and on April 1, 1892, she had another miscarriage, when the only trouble encountered was headache and sensorial hyperasthesia, affecting principally sight and hearing.

Society Reports.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated meeting, Nov. 9, 1892.

[ABSTRACTS.]

Dr. Anna M. Fullerton presented a paper on "Obstetric Surgery, with the Report of a Porro Case."

There is no subject connected with the science of medicine of which the average general practitioner has probably so little knowledge as that of pelvimetry, and the many deviations from the normal condition of things pertaining either to the maternal or fœtal economy which serve to render labor a pathological rather than a physiological process. The unquestioning relegation of childbirth to the field of nature by popular opinion curiously exercises its influence upon the professional mind; hence, we find that almost any physician dares to practice midwifery, although he may stand conscientiously aloof from the management of less critical conditions belonging to other specialties, as ophthalmology, otology, laryngology, or general surgery. In face of these facts, it is not surprising that we should have such statistics of maternal mortality as those reported by Dr. John Shaw, obstetric physician to the Northwest London Hospital, in a work written as late as 1890. "Insurance reports show," says Dr. Shaw, "that all of the deaths occurring in women between the ages of nineteen and twenty-nine, over 18 per cent. are due to puerperal causes, and of the deaths registered between the ages of twenty-nine and thirty-nine years, over 13 per cent. arise from the same source; in other words, all the other diseases and accidents to which women are liable at the earlier age, are less than five times as fatal as childbearing, and, at the later period, when the

activity of the function is waning, childbirth is still responsible for nearly a seventh of the total mortality arising from 'all the ills that flesh is heir to.' To these appalling numbers," he continues, "must be added the vast army whose lives are enfeebled and whose usefulness is crippled by some malady dating from the period of maternity." The injunction laid by beneficial associations in this country upon the payment of "sick benefits" to their members when suffering from what they denominate "womb disease," shows that from a business point of view pelvic disorders are far too numerous to make any investment based upon the chances of their occurrence or cure a possible means of gain. Whatever the sum she may have paid into the society, or however ill she may be, a woman suffering from pelvic disorder can claim no aid. This fact points a moral in itself.

Nor is injury to the mother the only disastrous result of ignorance and negligence in the management of labor. Too often, alas! in the subsequent history of the child, should it survive, we find evidences of brain injury: a slow or deficient mental development, actual idiocy, or congenital paralysis—conditions more pitiful than death and more to be dreaded. In an article read before this Society by Dr. J. Madison Taylor last spring, entitled "An Inquiry into the Causes Producing Cerebral Injuries in the Newborn," we have the frequency of such sequelæ referred to as follows: "Those of us who see many cases of nervous disease constantly have our hearts cruelly pained by parents who present children of defective and irreparable minds and bodies whose hurt has come through the process of birth." With regard to his investigations Dr. Taylor states: Questions directed to men of large obstetric experience result in a pretty uniform statment that more harm is done to the cerebrum of the fœtus by delays in the second stage of labor than by the use of instruments to expedite it. Neurologists also generally hold this view. In support of this statement he quotes from Dr. Abraham Jacobi and Dr. Egbert H. Grandin, of New York; Dr. Jaggard, of Chicago; Dr. Morton, of Ann Arbor; Dr. Barton Cooke Hirst, Dr. Wharton Sinkler, Dr. Joseph Price, and Dr. Edward P. Davis, of this city. Among those who believe that instrumental injuries exceed those resulting from prolonged labor he mentions Dr. William Goodell and Dr. George A. Rex, and expresses his own belief that instruments ignorantly and often unnecessarily employed are productive of serious consequences in a large proportion of cases. It is universally conceded that cases of congenital brain trouble do exist, and that the exciting cause may often be traced to an abnormal birth. The investigations of Sachs and Peterson, referred to by Dr. Taylor, show that in a table of 140 cases of paralysis, among 105 hemiplegias, 22 were found to be congenital; of 24 cases of diplegia, 20 were congenital; and so were 7, or possibly 8, of the 11 cases of paraplegia. This table of causes in the congenital cases showed that in 33 per cent. there was some difficulty in labor—simple delay or instrumental delivery.

When we look into causes of difficult or delayed labor, we find that, as a rule, it results from disproportion between the size of the child and the maternal passages, or from want of power on the part of the mother. The difficulties arising from malpresentations and other pathological conditions are closely associated with these.

A very much larger proportion of cases of difficult labor arise from pelvic abnormalities than is generally supposed. The lack of attention to the subject of pelvimetry in this country has led to the belief that American women are comparatively exempt from pelvic abnormalities. The graver grades of deformity are, to be sure, seldom met with; thus, the osteomalacial pelvis is not known in this country. The contractions and deformities due to rickets, however, are not at all uncommon, especially among the colored population. Prof. Anna E. Broomall, whose obstetric experience is probabiy one of the largest in the country, considers the most common abnormalities, taking the population as a whole, to be as follows: Among American-born women, the simple flat pelvis of the first grade of contraction, the average shortening of the antero-posterior diameter of the inlet being but 1. cm. below normal. The next most frequent cause of trouble she attributes to exaggerated inclination of the pelvis. Among the colored race the generally contracted rhachitic pelvis is most common, and the generally contracted flat pelvis the next in frequency. Dr. Edward Rey-

nolds, in his work on *Practical Midwifery*, just issued, states that in a recent analysis of the percentage of contracted pelves among the native- and foreign-born women of the out-patient department of of the Boston Lying-in Hospital, it was found that two out of every hundred American-born women showed some evidences of contraction, though it was usually slight; while among the foreign-born women of the clinic the proportion of deformity reached nearly 6 per cent. My own observations in connection with the maternity work of the Woman's Hospital vary somewhat from these figures, owing perhaps to the fact that we have in Philadelphia a larger proportion of foreigners than are found in the Eastern States. Among 1000 cases of labor of which I have had supervision since my connection with the Hospital about 14 per cent. had contracted pelves. If we include among abnormal pelves those of faulty inclination the number reaches fully 20 per cent. Careful measurements are taken of all the cases confined in the maternity wards. The generally contracted pelves were thus found to almost double the number of simple flat pelves, owing to the large proportion of negroes and foreign-born patients treated. In the simple flat pelvis the conjugata vera ranged between 8 and 10 cm. In the generally contracted between 5½ and 10 cm. The average contraction is not of a high grade.

The diversified conditions to which the various species of the human race have been subjected during their development have served to produce peculiarities in structure which have come to be regarded as characteristic. In the most intellectual races the pelvis is found to be most fully developed in area—a difference which must in part be associated with the greater size of the children's heads. The development is greater in the Circassian race, and affects especially the transverse diameter, which is lengthened, and the sacrovertebral angle thrown forward, owing, perhaps, to early burden-bearing, improper dress, and other vices of living. The simple flat pelvis thus results. In the more savage races, as Negroes, Hottentots, Bushmen, and Australian aborigines, not only is the size somewhat less, but the pelvic brim is more rounded because of the relative smallness of the transverse diameter, and thus shows a greater resemblance to the type of the monkey's pelvis, in which the antero-posterior diameter is greater than the transverse. The angle of the pelvic arch is also generally less. The comparative ease with which labor is accomplished among these nations, notwithstanding the smaller size of the pelvis, is due to the relative smallness in size and greater compressibility of the fœtal head. An exceedingly important factor in the labor is thus found to exist in the fœtal head. In his *Descent of Man*, Darwin tells us: "The belief that there exists in man some close relation between the size of the brain and the development of tne intellectual faculties is supported by the comparison of the skulls of savage and civilized races of ancient and modern people, and by the analogy of the whole vertebrate series." Dr. J. Barnard Davis has found by many careful measurements that the mean internal capacity of the skull in Europeans is 92.3 cubic inches; in Americans, 87.5 cubic inches; in Asiatics, 87.1 cubic inches; and in Australians, only 81.9 cubic inches. Professor Broca found that the nineteenth-century skulls from graves in Paris were larger than those from vaults of the twelfth century, and that the increased size, as ascertained by measurements, was exclusively in the frontal part of the skull—the seat of the intellectual faculties. One element of difficulty in labor, therefore, arises as the inevitable consequence of civilization, particularly when associated with the inactivity and luxurious habits of women of the higher classes—an undue development of the child, with increased ossification of the skull being the result of such habits. It is this resistance of the fœtal head, which increases with the age of the mother, that produces a history of increasingly difficult labors in a parturient whose earlier labors may have been perfectly normal. Such a history should at once direct attention to the measurement of the pelvis.

Ahlfeld's rule of determining the duration of pregnancy by obtaining the long diameter of the fœtal ovoid, by means of Baudelocque's callipers, one arm of the instrument resting just above the pubic symphysis, and the other over the fundus of the uterus, is that generally employed, especially as an aid to the determination of the period for the induction of premature labor, The measurement thus obtained is supposed to repre-

sent just one-half the length of the child in the extended position. The stage of development of the child may be thus determined, and the probable size of the diameters of its head. This rule is of necessity inaccurate, as the size of the developing child varies considerably in different cases at the same stage of gestation. It serves, however, as a working basis for approximating the size of the fœtal head. In the slighter grades of contraction, particularly in the simple flat pelvis, if the head be of normal size and compressibility, the labor may proceed according to the normal mechanism. If the size of the head be disproportionate to the grade of contraction of the pelvis, the mechanism in a flat pelvis is affected by the inability of the head to adapt itself to the inlet in the ordinary way, its efforts to engage in the transverse diameter, the extension of the head thus brought about by the action of the uterine forces combined with the resistance offered at the inlet, until the bi-temporal diameter, being brought into relation with the true conjugate, the head may clear the superior strait. The labor after this progresses rapidly as a rule, particularly in multiparæ, there being no obstruction in the canal. The main peculiarity in the mechanism lies in the long delay of the head at the pelvic brim. Another difficulty offered by this class of pelves arises from the fixation of the posterior portion of the head upon the promontory; the action of the uterine forces are then brought to bear upon the anterior, freer portion of the head, causing it to dip down into the pelvis. The planes of the head thus lose their normal relation to the planes of the pelvis, and an exaggerated obliquity is produced, which is one of the most common causes of impaction of the head in the pelvis. This obliquity cannot be prevented from occurring, because the fault lies in the pelvis. An attempt may be made to correct it manually, and at times may be successful. More frequently this condition, when recognized, is itself an indication for early extraction, because if left to itself the obliquity will increase, and the condition becomes more unmanageable. It is in the abnormal relations of the head to the pelvis thus brought about that, I believe, the greatest danger arises from the misuse of forceps. When the blades of the forceps are applied obliquely or transversely on the child's head, instead of on its sides, an acute and unequally distributed pressure results, to which, doubtless, many cases of cerebral palsy are due. In the flat rhachitic pelvis the reduction in the antero-posterior diameter is greater, hence this type of pelvis is more difficult to manage than the simple flat. The nearer the period of puberty the disease has occurred the greater the deformity produced. There is nothing in the appearance of the patient to call attention to the existence of the simple flat pelvis, unless there be considerable reduction in the antero-posterior diameter, when the abdomen of the gravida will be pendulous, and there will be greater mobility of the uterus because of the absence of fixation of the fœtal head at the beginning of labor.

Too great inclination of the pelvis likewise presents an obstruction to the engagement of the presenting part by carrying it beyond the area of the superior strait. Exaggerated obliquity of the fœtal head, together with other errors in presentation, position, and variety, are thus brought about. A tedious first stage of labor is the rule. Positional treatment will often enable this difficulty to be overcome without further aid. The accoucheur may assist the engagement of the head by flexing strongly the spinal column upon the pelvis. Manual pressure above the symphysis pubis, by which the presenting part is carried backward and more directly over the inlet, is also often successful in overcoming the difficulty. In the equally contracted pelvis extreme flexion is essential to the engagement of the head, and an actual occipital presentation is thus brought about through long-continued compression. The labor goes on as in normal mechanism, except that there is delay, slow engagement, slow descent, and slow explusion.

In the generally contracted flat pelvis the mechanism approaches that of the simple flat, but the labor is much prolonged. Engagement occurs in the transverse diameters.

The rate of maternal mortality in contracted pelves has been estimated at five per cent. and the fœtal twenty-one per cent. This probably represents the results when operative procedure is delayed.

The asymmetrical pelves of this country are the oblique ovate resulting from scoliosis, coxalgia, luxation of hip-joint, other injuries serving to shorten one limb

during the formative period of the pelvis. If the existing obliquity is but slight, the labor may not be affected, the only modification being its lengthening. In high grades of deformity, however, the prognosis is very grave—75 per cent. of the children being lost, according to one authority. The mortality of the mother is represented as about half this. If there be room enough in the pelvis, the induction of premature labor is indicated if the patient be seen in time. Thus, if the antero-posterior diameter of the inlet be 8 cm., labor may be induced about the eighth month. If the diameter is below this, abdominal delivery is indicated. In the management of labor the accoucheur must be observant of the earliest symptoms of exhaustion on the part of mother or child, and prompt in tendering the required assistance before it is too late.

Among the thousand cases of labor occurring in the service of the Woman's Hospital in the past six years, 19 per cent. required operative interference at full term. There were 8 deaths among the women delivered—less than 1 per cent. All but two of these were due to constitutional disease complicating pregnancy. Two sudden deaths occurred—one from shock following rupture of the uterus in a neglected transverse presentation; the other from air in the heart after a delivery, complicated by the pressure of a large fibroid. The fœtal mortality was 4 3-10 per cent. from all causes. In 40 cases in which contracted pelvis existed, labor was induced prematurely without the loss of a single mother or child, and thus the complications which might have resulted at full term were averted. Among the other operations performed were 79 forceps applications at the brim and in the upper portion of the pelvic canal, due to difficulty in descent of the head; 75 forceps applications at the floor of the pelvis for uterine inertia and rigidity of the soft tissues; 11 cases of podalic presentation required assistance in the delivery; and 4 craniotomies were performed, all on dead children. One Cæsarean section, one Porro operation, and one symphyseotomy were also done. Inclusive of the induced labors, the percentage of deliveries requiring artificial aid was 23.

The obstetrical resources for overcoming the mechanical obstacles afforded by moderate degrees of contraction are the induction of premature labor, craniotomy, forceps, version, and symphyseotomy, or pubeotomy. Undoubtedly the management, *par excellence*, of moderately contracted pelves is the induction of premature labor; but this necessitates a careful study of the patient's pelvis early in the pregnancy, in order that the time elected for the operation shall be most favorable to mother and child. The advantages of premature delivery to the mother are owing to the diminished head-pressure, hence, the rare occurrence of lesions of the genital canal. The disfavor with which the induction of premature labor has been heretofore regarded has probably been due to the large maternal mortality which attended its earlier performance, and which resulted, doubtless, from the employment of intra-uterine manipulations for its accomplishment and lack of antisepsis. The large fœtal mortality was due to insufficient knowledge of the needs of the premature infant and lack of care in its nursing. Spiegelberg gives the maternal mortality as 18.8 per cent., and the fœtal as 66 per cent. Among 30 cases in which I induced labor last year, there was no maternal or fœtal mortality. It is rarely necessary in this country to perform this operation before the thirty-fourth week for pelvic contraction. The only way of testing the value of induced labor is to compare the results of the latter with those of full-term labors in the same patient. With this view Dohrn reported 19 cases, with 41 children at term —37 of whom died. In 25 subsequent pregnancies in the same cases premature labor was induced, with 15 living children. Milne, in the *Edinburgh Med. Jour.*, vol. xix., reports six women as giving birth at term to 12 children, of which 11 were dead. In the succeeding 38 pregnancies of the same parents premature labor was induced, and 35 children were born living.

The aid of the couveuse—or hatching-cradle for infants—was very appreciable in the management of the premature infants born in our Maternity; and when, as in France, the use of the apparatus becomes more general, the induction of premature labor will, I believe, stand in higher favor in our own country.

The performance of version and extraction in contracted pelves exposes both mother and child to perils of no insignifi-

cant character. Borinski, collecting the statistics of version from the Breslau clinic, reports 58 cases in ordinary flattened pelves, with the result that just one-half the children were born dead. Three of the mothers died of results connected with the operation. In speaking of the high forceps operation, Professor William T. Lusk refers to the collected cases reported by Dr. Harold Williams. Among 119 cases, of the mothers nearly 40 per cent., and of the children over 60 per cent., perished. "So long as the head does not engage at the brim," says, Professor Lusk, "there is no rivalry between version and forceps. The latter should be placed under the ban as hardly less dangerous than the Cæsarean section." Version, however, is not applicable to the generally contracted pelvis; hence, in the revival of symphyseotomy we hope to find a method of procedure which will solve the difficult problem of non-fixation of the head in just such cases, and entirely do away with the barbarous practice of craniotomy on a living child. The operation is still in its probation in this country, but the brilliant results attained in Europe, as reported by Dr. Robert P. Harris, leads us to hope that we have in symphyseotomy an operation by which far less destruction to the maternal tissues shall result than can be claimed for either forceps or version, and by which, also, the injurious effects of pressure upon the fœtal head may be averted.

From the histories of reported cases, the chief objection to this operation, which lies in the possibility of non-union of the divided symphysis, would seem to be removed. In the only case of which I have any practical knowledge—that performed by Professor Anna E. Broomall, on Octo-10th, in our Maternity—the union is apparently perfect. Hubert, in a recent article in the *Archives de Tocologie*, warns us against the separation of the pelvic symphysis in mothers who are too old.

In cases of absolute pelvic contraction, where the congugata vera falls below 6.5 cm., and in the deformed pelves in which there is extreme narrowing, delivery by abdominal section is indicated. The two forms of operation usually resorted to are the Sänger modification of the classical Cæsarean section and the Porro-Müller amputation of the uterus. Two operations of this class have been performed in our Maternity wards during the past six years. The first was a Cæsarean section performed by Dr. Anna E. Broomall, on a patient with a generally contracted rhachitic pelvis, the congugata vera of which measured but 6.5 cm., or a little over two inches. The patient's childbearing history was as follows: Three children had been prematurely born, all of whom died. Her first labor at term was a forceps delivery; the second, a decapitation; the third, a craniotomy; the fourth, a forceps delivery, the child being lost; the fifth, a Cæsarean section. Both mother and child doing well after the section.

The second case of abdominal delivery was one performed by myself a little more than six weeks ago. The patient was a primipara, aged twenty-four years; four feet eleven inches in height; rhachitic, with marked kypho-scoliosis. Due to an old, unreduced dislocation of the left hip-joint, there was ankylosis with marked lateral obliquity of the pelvis and a beak-shaped pubic symphysis. The congugata vera was estimated at 7 cm. The patient was admitted to the Maternity wards of the hospital suffering with an acute bronchitis superimposed upon an attack of rheumatism. She was then in the latter part of the eighth month of pregnancy. When she had recovered from her illness, a consultation was held, and it was decided to deliver by abdominal section when the patient was nearer full term.

On September 26th I performed the operation assisted by Dr. Broomall, several other physicians being present by invitation. The nature of the operation had been explained to the patient's friends as well as to herself, and it was left to them to decide as to whether the uterus should be removed or not after delivery. My own feeling was strongly in favor of the uterine amputation, as it seemed to me totally unnecessary to preserve the childbearing function in a woman incapable probably of bearing healthy children, and bearing them, at any rate, at such risk. The parties concerned agreed with me in the matter, and the Porro operation was done. The uterus was lifted out of the abdomen before the uterine incision was made, and the rubber cord applied, as usual, for the control of hæmorrhage. Very little blood was lost. No fluid entered the peritoneal cavity. The child gasped as soon as delivered and

was soon crying quite vigorously. The uterus contracted firmly as soon as emptied. Before the delivery of the child, hæmorrhage was controlled by Dr. Broomall grasping her hands around the neck of of the uterus; after the delivery the rubber cord which had been placed was tightened. The placenta was delivered and the uterus cut away, after the application of a wire ligature. The stump was secured in the lower angle of the abdominal wound. I strongly desired to follow the method suggested by Dr. Baer, of ligating the uterine arteries and dropping the stump, but not having the same familiarity with this method as with the original one of clamping it, I refrained from running any risk. The mother made an excellent recovery and is perfectly well to-day. The child, a girl weighing six and and a half pounds at birth, now weighing nearly nine pounds, and in good condition. The operation was done about a week before full term.

I am indebted to Dr. Harris for some data concerning the Porro operation which I append to this paper.

"The Porro-Cæsarean operation has been performed over four hundred times, since its introduction in 1876, sixteen years ago; and its fatality has gradually decreased up to the present time. If all of the cases were operated upon in good season, and by men of known skill, their fatality of result would no doubt be reduced to a very small precentage. As an evidence of this reduction, I have to state that there were in the year 1888, 29 operations, with 16 deaths, or 55 per cent.; and in 1890, 45, with only 7 deaths—a mortality of 15⅗ per cent.

"There are three modes of treating the stump, viz: 1st, the original one of clamping it and securing it in the lower angle of the abdominal wound; 2nd, of dropping in the stump, as in many cases of hysterectomy, after ligating the uterine arteries and suturing the peritoneum over the cut cervix; and, 3rd, of securing the stump prepared the same way, by stitching it into lower angle of the wound, peritoneum to peritoneum. The original method has the least risk, particularly when the subject is not in labor, or has been for a very short time. Many women were lost in the early days of dropping in the stump, as many as 13 having died out of the first 18; but in the perfecting of the method, 17 have been saved out of 20, a mortality of 15 per cent. This is the ideal operation with several skillful men who have had very good results, and it leaves the woman with a free abdominal wall and abundant space for bladder expansion after her recovery.

"The Porro operations of our own country have been largely confined to cases of obstruction by tumors, as operators have usually preferred the improved Cæsarean section in those of pelvic deformity for two reasons: 1st, the fatality has been much less here; and, 2nd, almost all of the patients are married women, and operators do not think proper to destroy their internal organs of generation. In the last six years there have been 18 Porro operations with 12 recoveries in the United States (against 63 improved Cæsarean operations with 43 recoveries), 1 only having died out of the last 12, and this woman had been seven days in labor; and had a placenta prævia. Of the last 12 Porro cases, 2 died: 1 was in a favorable condition prior to the operation, and the other was already septic. both operations appear to be reaching a much lower measure of fatality, their result depending more upon the condition of the woman at the time of the operation than on the choice of method. In European maternities in a large number of operations, that of Sänger has the advantage in their final results."

Dr. Mary Putnam Jacobi, of New York City, read a paper on "Urethral Irritation."

The causes of vesical and urethral irritation in women are both numerous and diverse. Gynæcologists constantly refer to the irritation which accompanies uterine lesions—either inflammations or displacements. Dr. Howard A. Kelly has called attention to the tenesmus and frequent micturition which may be excited by lesions of the ureters, and such tenesmus may, for a certain time, be the most salient symptom of a renal calculus. On the other hand, the distinguished Philadelphian gynæcologist, Dr. Wm. Goodell, has truly said, that "A nervous bladder is one of the earliest symptoms of a nervous brain; for nervousness means a deficient control of the higher nerve centers over the lower ones; the vesical irritability indicates a lack of brain-control." The following case excellently illustrates this remark:

It was that of an unmarried woman, about twenty-five years old, of a highly

nervous temperament. A year previous to consultation she had, together with a sister, opened an office for type-writing. The business responsibility was unfamiliar, the work often heavy, and the patient had become anxious, worried and excited over it. She did not, however, complain of but one symptom, namely, a frequent vesical tenesmus, recurring night and day. The passage of urine was free, but preceded and followed by an unbearable distress, apparently situated in the neck of the bladder. The urine was entirely normal in every respect, free from albumin, sugar, oxalates, or other sediment, inorganic or organic. The urethra was normal, and the bladder could be explored by the sound without causing any pain. There was no uterine disease. I should add that there were no definite hysterical symptoms, unless the irritability of the bladder be reckoned as hysterical. The patient was entirely cured by local faradization—one electrode being placed over the lumbar spine, the other over the bladder. A few applications were first made at my office, and immediately followed by diminution in the irritability of the bladder, and in the tenesmus. Then the patient procured a faradic battery for herself, and applied the current for about twenty minutes every night. Relief was speedily obtained, and a complete cure effected in a few weeks.

My recollection of the details of this case is incomplete, as it was observed by me a good many years ago, and I have not full notes. If the frequent and spasmodic contraction of the bladder be due to an over-excitation of the nerve centers of the lumbar spinal cord, and if this over-excitation be due to loss of cerebral inhibition, it is difficult to understand why the local application of the stimulating form of the electric current should have had so positively curative an effect. The explanation may be approximately referred to the general action of faradic electricity on hysterical peripheric neuroses—action which may almost be called specific—since it is exerted with success in all three forms, namely, hysterical paralysis, hysterical cramps, and hysterical paræsthesias.

Another case was that of a markedly hysterical woman, aged fifty years, and who had passed the menopause, but who was subject to profound analgesia of the lower extremities, so that a pin could be plunged into the flesh and buried to its head without causing the least pain. This patient was subject occasionally to acute attacks of vesical irritability, associated with great general nervousness and depression of spirits. Such an attack was promptly dissipated by the injection into the bladder of two grains of cocaine dissolved in an ounce of water.

A third case was chiefly remarkable for the long duration of a single symptom, for the limited extent of its causal lesion, and for the final success of the treatment. The patient was a West Indian creole lady, between fifty and sixty years old, a widow, who had never had any children, and had never suffered any uterine disease. She was remarkably short, had an old-standing lumbar scoliosis, and suffered often from the muscular pains of lithæmic indigestion. She consulted me for an annoying and constant sense of pressure at the bladder, or rather more externally, at the urethra, attended with a moderate frequency of micturition, but no alteration of the urine. Just before and after micturition the sense of pressure increased and became more painful. Fifteen years previous, to relieve this same symptom, the urethra had been forcibly dilated by Dr. Marion Sims, but the patient insisted that she had not been at all benefited by the operation.

No spasm and but little pain was caused by the introduction of the catheter; and dilatation of the urethra with an ordinary urethral speculum failed to reveal anything abnormal. I tried several plans of treatment upon the case, which were all quite unsuccessful, and the patient finally ceased attendance. About five years later, very much to my surprise, she returned with exactly the same complaint. On this occasion, thinking that this peculiar and limited morbid sensation might be a pure neurosis, I applied faradic electricity by means of a double electrode inserted into the urethra and just within the bladder. This treatment at once greatly relieved the patient, and the relief persisted for twenty-four hours, when the distress returned. Repetition of the local electrization had the same effect, and the patient was so much more improved by this treatment than by any other which had been tried, that she persisted in it for several weeks. By that time she considered her-

self very decidedly improved, but not yet well. I had then an endoscopic examination made, and it was found that the mucous membrane of the bladder immediately surrounding the urethral orifice was swollen into a ring. The surface of the ring was moderately reddened. It seemed as if this protruding localized hypertrophy of the vesical mucosa had formed during efforts at bladder expulsion made in former years against some obstruction—very possibly a spasmodic contraction of the neck of the bladder in consequence of a fissure. The faradic electricity had relieved by determining retraction of the submucous cellular tissue. It seemed probable that the local application of a strong astringent would effect a more permanent shrinkage of the swollen mucosa. Accordingly, applications were made of solution of nitrate of silver—five grains to the ounce—by means of an instrument that permitted the application to be made exclusively to the affected locality. The result was immediately beneficial, and a few similar applications, made twice a week, succeeded in entirely curing this troublesome symptom, which had been annoying the patient for twenty years.

My fourth case seems to me of unusual interest, both on account of its medical history and of the physiological doctrine it illustrates. The patient is a woman of thirty-five years of age, who for many years had been overworked and underpaid in responsible business employments. Eight years ago her health began to fail, and in particular she began to suffer from two symptoms—severe spasmodic dysmenorrhœa and a distressing, burning sensation at the urethra. This was at first said to be constant, but inquiry showed that the patient suffered little from it while lying in bed, but intolerably if she attempted to walk, so that she soon became unable to walk a block or two. She consulted a prominent gynecologist, who treated her locally for three months, then advised her to enter the Woman's Hospital. She remained for some time in one service, and at length the surgeon declared that he could do nothing more for her unsess she would submit to the operation of lan artificial vesico-vaginal fistula. Refusing this, she entered another service in the same hospital, and here Emmet's button hole operation on the urethra was proposed and performed. The patient, however, did not benefit in the least from these various manipulations, but rather grew steadily worse. According to her statement the most careful exploration was repeatedly made for any pelvic lesion adjacent to the bladder which could explain the persistent distress, but nothing definite was ever found.

After ten months' of residence at the hospital the patient left it, rather worse than when she entered. She then went to England and consulted Dr. Keith, who, after a careful examination, advised her to desist from all further treatment. She followed this advice, and attempted to resume work, but her strength continued to deteriorate, and she finally was compelled to give up her work again, and remained a wretched invalid.

When the patient consulted me she was a thin, pale, anæmic woman, quiet and rather slow of speech—rather unusually free from the excitability and mobility which so often characterizes hysterical patients. Examination of her blood found 70 per cent. of hæmoglobin, and 1,960,000 blood corpuscles to the cubic millimetre. There was a continuous hum at the jugular.

The patellar tendon reflexes were normal. The subjective symptoms were: a constant sense of fatigue, mental and physical, rendering all exertion impossible; this associated with a sense of mental confusion and imperfect memory; distress, rather than pain, in the back of the head; profuse sweating at night; tenderness on pressure on Charcot's point, but on the right side; the skin over the hypogastrium and thighs moderately hyperæsthetic to touch, and extremely so to faradic electricity. There was a constant burning pain at the urethra, not at all aggravated by micturition, but greatly by walking. A distance of one or two blocks could be traversed with comparative ease, but then the burning pain became intense, a bearing-down sensation in hips and hypogastrium was added, and a heaviness extending down the thighs.

At menstruation the patient suffered intensely for several days, but during the pre-menstrual week she usually felt pretty well, at all events much better than at any other time. This fact contrasted emphatically with the pre-menstrual pains which almost invariably characterize ovarian disease. Again, micturition was neither

painful nor frequent, and was unaccompanied by tenesmus. A local examination found the uterus perfectly healthy; nothing abnormal discoverable in the pelvis except tenderness upon pressure in the region of the left ovary. The latter, however, was not sufficiently accessible to be exactly defined.

The urethra remained deformed by the partial failure of the union attempted after the button-hole operation. A catheter passed into the bladder caused no pain until it reached the neck of the bladder, then a spasm occurred, moderate in intensity but causing great pain. The spasm was easily overcome, and within the bladder the instrument caused no pain. The urine was normal in every respect. The patient had discovered for herself that the ingestion of large quantities of hot water —increasing the quantity of urine— diminished somewhat the urethral paræsthesia. If for any reason the urine became scanty, the burning became intense. The negative result of the local examination was entirely in accordance with that of the repeated explorations which had already been made by distinguished surgeons. In view of it, and of all the circumstances of the case, I myself made the diagnosis of a severe cerebro-spinal neurasthenia, of which the urethral burning, the ovaralgia, and the dysmenorrhœa were concomitant symptoms. They were, so I argued, symptoms projected on the periphery from a brain so badly nourished as to be the prey of sensory hallucinations, generated in its lower visceral centres. The history of the case seemed to indicate that local manipulation of the bladder tended to increase, rather than diminish, the subjective hyperæsthesia. The aggravation of the paræsthesia by walking, the relief afforded by recumbency, seemed to me to depend on the facile exhaustion of the centres in the lumbar cord, with their double relations to the innervation of locomotion, and to that of the pelvic viscera. It did not, as evidently had been supposed, argue a coarse lesion of these viscera, which might be aggravated by pressure; rather a vasomoter neurosis due to loss of spinal control when the lumbar cord centres became exhausted.

In a very large number of cases of cerebro-spinal neurasthenias, with irritative symptoms, depend upon lithæmia, or, more precisely, upon defects in the hepatic digestion of albuminous foods.

Reasoning most plausibly, though from too few experimental data, Haig has argued that many irritative or explosive symptoms in lithæmic cases depend on a saturation of the nervous tissues with uric acid; that the nerve explosions of migraine, and also of epilepsy, are correlated with a uric acid wave, as uræmic eclampsia is believed to depend on the surcharge of the brain tissues with excrementitious substances.

Herter, of New York (*N. Y. Med. Journal*, 1892), in a recent essay, calls attention to the numerous putrefactive products of nitrogenous foods, which form in the intestine when digestion of such foods is imperfect. Estimating these putrefactive products by the ethereal sulphates which appear in the urine, Herter has studied their relation to epileptic attacks, and believes to have found some degree of correlation between the formation of such substances and the convulsive seizures, and at any rate an abnormal degree of intestinal putrefaction in epileptic neurotics. These recent researches tend to focus and accentuate the conviction which many observant physicians must have formed, that the irritative phenomena of neurasthenic conditions are probably traceable to the immediate action on nerve centres of toxic substances circulating in the blood.

It is known that the forms of neurasthenia which are characterized by mere simple debility, are often wonderfully benefited by an excessive meat diet. This determines an excess of nitrogenous metabolism which, when well borne, is a most powerful stimulant to the nutritive processes of nerve centres. In irritative neurasthenias, however, the milk diet is often far better tolerated, and the explanation is probably to be found in the fact that on such diet the various perversions of nitrogenous metabolism are reduced to a minimum.

In the case in question I resolved to experiment with both diets, and began with the meat, intending to administer a pound and a half a day. However, in the first two days the patient only succeeded in in taking three-quarters of a pound a day, and on the third came to me in a very curious condition. Her habitual air of quiet depression had changed to great restlessness. Her respirations were 28, somewhat panting; her pulse 120, feeble, the

sphygmograph showing a marked respiratory curve. Her mouth was parched, she felt feverish, but, though she had continued to drink a great deal of hot water, the urine had become scanty and high-colored, and the urethral burning was intense. She had been unable to sleep the previous night, was nauseated, and had contracted an intense repugnance to even the thought of animal food. In spite of the restlessness the patient was drowsy. This condition, produced as promptly and distinctly as if in a laboratory experiment, suggested several explanations, and, unfortunately, there was no opportunity to analyze the urine in such a way as might aid in the choice between them. Thus there was the possibility of a uric acid saturation of the nerve centres, an improbable theory, as the symptoms were quite different from those habitually associated with uric acid excess or retention.

The drowsiness especially suggested that peptones, sufficiently modified in the liver, had passed almost unchanged into the circulation, as in Lauder Brunton's experiment.

From a third point of view, the imperfect digestion of the meat had resulted in abnormal putrefaction in the intestine with generation of toxic substances, which, passing into the blood, had occasioned the entire cortége of pseudo-febrile symptons. This, on the whole, seemed the most plausible hypothesis.

The most important practical fact was the great aggravation of the urethral burning or paræsthesia under these circumstances, which certainly tended to confirm my hypothesis of its origin in constitutional conditions. The diet was changed to one exclusively of milk, three quarts a day. Two days later the patient returned, seeming a different person. The restlessness, hurried respiration, and nausea were gone; the pulse dropped to 84, the urethral burning and ovaralgia disappeared, the patient feeling for the time quite comfortable.

The case is still under observation and the symptoms oscillate, although with, on the whole, a steady improvement in the condition of the patient. She is kept in bed the greater part of the day, on a diet of milk, baked apples, and a little rice; takes a steam leg-bath followed by cold sponging, minute doses of iron with maltine. Sleep is greatly improved, the mental depression lessened, the urethral burning reduced to a minimum, only occasionally aggravated; such an aggravation occurred on a cold, damp day, but on the next, a bright and clear day, the patient again felt a great deal better. Nevertheless, she was suffering rather more than usual from the occipital pain. This latter was entirely dissipated by an application of static electricity below the occiput. The same application was then made along the spinal column, and although for two minutes the patient was greatly fatigued, she then experienced an agreeable warm glow and sensation of prickling all over her body; and coincidently, what degree of urethral distress and ovaralgia was for the moment persisting, entirely disappeared.

Throughout that day and the next these two symptoms remained entirely absent, but the occipital headache returned on the second day, to again disappear on the third.

The absence of local pelvic lesions in this case might seem to render it inappropriate for presentation at this meeting. But I have thought it interesting because the existence of local symptoms seems to have been sufficient to convince so many distinguished physicians that such lesions must exist, even though they failed to discover them. Yet it is a general law for sensory symptoms that any one may be due to one of three conditions: There may be a structural lesion at the point to which the sensation is referred. There may be a lesion at a distant or adjacent point from which nerve irritation is irradiated to the point of sensation. Finally, there may be a functional disturbance of the brain nowise representing the part, which disturbance is expressed by the morbid sensation referred to the periphery. On this account there should not have been any difficulty in regarding this urethral symptom as an expression of central nervous disturbance, from the moment that careful examination had failed to detect any local lesion of the bladder, urethra, or adjacent pelvic organs. Yet the presumption in regard to such lesions was so great, that when they were not found, they were almost invented; and when prolonged surgical treatment only left the patient in a worse condition than at first, she was given up as incurable, because her parts refused to adjust themselves to a preconceived erroneous theory.

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THE MEDICAL AND SURGICAL REPORTER.

SATURDAY NOVEMBER, 26TH, 1892.

THE FUNCTIONS OF THE PERITONEUM.

Evidently the medical profession does not appreciate the importance of the peritoneum as a physiological factor in the human economy.

The idea prevails generally that this membrane serves merely as a lining for the abdominal cavity and an external covering for the vital organs within it; and that its complex folds and attachments are merely ingenious mechanical arrangements for supporting the various organs it covers. This is the anatomical view. Physiologists have failed to study its functions as thoroughly as those of other organs of the body, apparently satisfied with the anatomical view of the membrane and regarding its peculiar formation and arrangement, otherwise inexplicable, as the remains of something useful in lower forms of life, but of which the evolution of man has not as yet removed all traces. This, in spite of the persistent and invariable occurrence of these "traces" in the entire human race, and it was not until modern abdominal surgery forced an explanation of phenomena, that the peritoneum was recognized as being glandular in structure and function. This was some advance but does not explain all things.

Pathologically speaking, the entire profession is well aware of the enormous fatality of the diseases of the peritoneum, and it is only very recently that abdominal surgery has shown that peritonitis is not necessarily death. Ignorance on the subject certainly obtains when a prominent physician states before the Royal College of Physicians of London, that "the peritoneal structure has functions no doubt, but they are so unimportant or so obscure, that, however much they are disordered or suspended, no signs peculiar to the consequent disease can be discovered." Holding these views he is right in saying he cannot say "anything new to such an audience." If the views of his hearers are no further advanced that his own, it would seem a waste of time to recall to them facts, forgetting of which was a benefit. Doubtless his views can be considered conservative, as most of his study on the subject was evidently done in the mortuary.

His methods of study differ in every respect from those of an abdominal surgeon who has done as much as any to dissipate the unreasonable fear of touching the peritoneum and its contents. As a physiologist, Mr. Lawson Tait, does not have the pre-eminence he does as a surgeon, but the same characteristics that placed him at the head of abdominal surgery in Great Britain —the utter lack of reverence for professional idols; the prompt discarding of theories that would not fit conditions; the determination to exercise common sense in the study of his own material and to arrange and formulate his observations and draw con-

clusions in accord with facts; his frankness in acknowledging and correcting his own errors as he discovers them; and the enormous field of observation he has enjoyed —these characteristics require at least thoughtful consideration of any subject for which he is willing to be responsible.

Whether the deductions Mr. Tait has drawn from his own observation and experience—and his observations are made upon the living subject, not the cadaver, shall eventually be established wholly or in part, or whether further investigation shall show them utterly false, matters little. In furnishing a tenable, concrete working theory, he has done more than all that have gone before to advance the knowledge of what is, as he claims, an organ whose vital importance is second only to that of the brain. In a paper read before the Harveian Society of London, Mr. Tait re-presents in a collated form the observations published from time to time during a number of years preceding. The conclusions he arrives at are that the peritoneum has a glandular function "as all the great organs which are regarded as having functions preparatory to and essential to the general nutrition of the body, and most of these regarded as excretory, have this curiously-involved relation to this mysterious and complex membrane, with the doubtful exception of the pancreas. Further, the membrane itself has a series of strange and invariable plications and redundancies of surfaces, the omenta, mesenteries, and various appendices which, should its function be that of active secretion or absorption, clearly must be of great service. Then, finally, its surface everywhere is excessively vascular, hyperæmic, as it were; its minute anatomy shows abundant arrangement of stomata, like those on the leaves of a tree, eminently suggestive of active work of some kind. It is most profusely supplied by nerves which are not derived from the motor tract. Normally these nerves convey no sensation, and therefore it may be assumed that they are nerves for controlling or directing some special function."

In addition he said, "I have to point out that one great anatomical fact concerning the peritoneum has had, so far as I can discover, no kind of importance attached to it in its pathological consideration; in fact, it is not alluded to at all save in the anatomical text-books. It is that all the organs actively engaged in the primary preparation of the systemic nutrients are not only enclosed in the peritoneum, but all the blood gathered from these great organs is collected by a series of minute venous radicles exposed voluminously and immediately under the peritoneal epithelium to any influences which may arise in it. In addition to this, the whole of the blood prepared in or by these organs is mixed together in the portal vein and carried into the liver, where it undergoes its final change previous to the oxidation which seems essential for tissue nutrition everywhere.

In regard to the omentum he suggests "that it is the arbiter of the intra-peritoneal currents, there being an ebb and flow in the peritoneum. The great serous sac holds in it, like a dressing bag, a great mass of serous covered organs which may, any and all of them, secrete into its cavity, or absorb from it. Possibly they may carry out one process at one time and the other at another. The omentum, I think, does so certainly."

He believes that the cause of death in peritonitis is a "disturbance of the ebb and flow of the serum stream of the peritoneum and the disturbance of the function of the liver. In fact, the liver is the lethal organ in peritonitis." This is a very brief and incomplete statement of Mr. Tait's theory of the principal functions of the peritoneum and it furnishes a starting point for thorough investigation.

Translations.*

MARIE B. WERNER, M. D.

PHILADELPHIA, PA.

A. Bier, (*Archiv. f. Klinisch. Chirurg, bd.,* 43) describes an operation for the removal of bony sequestræ under the name of Osteoplastic Nekrotomie. This operation is, in the author's mind, especially adapted to necrosis of the tibia. His method of operation is as follows: He makes a transverse incision through skin down to and through the periosteum corresponding to the tuberosities of the tibia, beginning in the middle and extending to its inner surface. As soon as he has reached the crest of the tibia he leaves the periosteum, but extending the incision one finger's-breatdh beyond the crest through the soft parts only. A similar transverse incision is made two fingers above the ankle-joint. The inner ends of these incisions are united by a long incision, which extends down to the bone; at the point where the transverse incisions leave the crest, he splits the fascia transversely, the soft parts of the inner surface are pushed aside and half the thickness of the bone and periosteum of the inner tibial surface is split; a small saw is introduced through this cut and the bone sawed half through at the transverse incisions, the bone is then split in its long diameter with a chisel and lifted back—thus the tiba resembles a coffin with its lid thrown back, the sequestræ are of easy access the granulations and degenerated bone tissue can be removed with a sharp spoon; the various bone fistulæ treated (rividirt). After careful disinfection the flap is replaced, the soft parts united with sutures; or the cavity may be tamponed temporarily the wound being sutured secondarily.

The cavity remaining in the bone always fills with blood, especially if the tampons are not used—subsequent history usually shows that moderate suppuration is unavoidable. An attempt to use *Senn's* decalcified bone plates proved unsuccessful since they were usually discharged, often months after the operation.

Osteoplastic Necrotomie was performed thirteen times—eight on the tibia—one on the pelvis—one on the ulna, three on femur. The author, however, has concluded not to perform the operation on the femur again since he has found those bones nearer the surface more adapted for it.

In comparing results with the *Esmarch-Riedel* method in which more of the bony tissue is removed, leaving but a shallow cavity, into which the soft parts and skin are readily caught, or that of *Neuber*, which fastens the soft parts and skin into the bony cavity by means of sutures and nails; B. feels that these can only be used in cases where the disease is some distance from the epiphyses, and since they destroy so much of the bony tissue that they are less conservative and physiological than Osteoplastic Nekrotomie, this latter preserving more of the original bony contour, and at the time of operation permitting a radical removal of all diseased tissues. The time of healing also compares favorably with other radical operations—two—three months.

H. Kümmel *Centralb. f. Chirurg., No.* 42, 1892) reports three cases of retroflexed uterus which he corrected by operation in the following manner: He passes three sutures through the fundus, one of which he also passed through the periosteum of the symphysis the two lateral fortifying this in being placed so as to keep the uterus in immediate contact with the symphysis. K. regards this as an improvement on ventro-fixation, since union to the periosteum will be less apt to give than that to abdominal walls; but he also cautions that there may be some danger of the point of the needle breaking in the bone in taking the periosteal stitch.

One case upon whom he had performed this operation was confined 1½ years later. Labor was normal, six weeks after an examination showed the uterus still occupying its anterior position.

The other cases seemed to be doing well, respectively, 1½ and two years after operation.

Messner, of Wiesbaden, (*Centralb. f. Chir.*, 1892, No. 44) presents an interesting study in Asymmetry of the Thorax and contractions of the vertebral column following infantile paralysis. As an incentive to his studies he cites the case of a girl of 12 years, presenting marked scoliosis in the dorsal region and pronounced lordosis of the lumbar region;

* Translated for MED. AND SURG. REPORTER.

there is also a lack of development of the entire right side of the thorax, the defective condition extending upward to the right half of face and head; the arm and leg of same side are slightly atrophied. No absolute paralysis is present, though response to electrical stimulus is slow on the affected side. By extension the vertebral column can be entirely straightened. The early history of the child is interesting. She was well developed and healthy at birth; at nine months had convulsions, followed by some paralysis of the entire right side—this was, however, transient since she learned to walk at 18 months; there was no history of rachitis; and it was not until she was 7 years old that the parents noticed any deformity. A systematic course of treatment was not taken, and the disease was allowed to gain considerable headway. This case induced the author to study the early symptoms of scoliosis, especially in relation to infantile paralysis. An analysis of 156 cases of scoliosis showed that 8 had an unmistakable history of infantile paralysis. This group of cases is designated by Messner as Paralytic Scoliosis, and is distinguished from the rachitic form by the late or entire absence of fixation, whereas in the rachitic form fixation takes place early. This was ably demonstrated in the case reported, in that, there was no anchylosis or torsion of the vertebræ. Another noteworthy point was that the convexity of the cervix was always in the direction of the healthy side, while the paralyzed or paretic muscles were found on the concave side; this was of uniform occurrence in 7 of the 8 cases studied; the eighth being somewhat further advanced in paralysis. The electrical muscular tests were found to be of value in diagnosis, and sensation was not markedly impaired. The prognosis of this form of scoliosis is more favorable than that of rachitic origin. The author does not deny that there may be some advanced cases in which a cure would be out of the question.

Treatment consists in the use of electricity, cold sponge baths, and moderate massage.

In addition two indications must be met: 1. Support for the spinal column, this is accomplished by a properly adjusted corset. 2. Development of the muscles of the back, by gymnastics, massage, electricity, douches and out-door exercises. Of the 8 cases, 3 recovered completely, 4 were markedly improved; and although the 8th case was too far advanced to promise much, the author succeeded in placing the child on its feet after adjusting a plaster jacket, and extending from this a support for the hip joint.

Terillon, reports,in his eighth series, ovariotomies with one death 16 days after operation, due to chronic uræmia—both kidneys atrophic and sclerosed. He prefers asepsis to antisepsis. His experience after dropping the pedicle in cases where more than one ligature is necessary, in a thick pedicle, has been that up to the 25th or 30th day after operation convalescence progressed normally, after this time, however, there was fever accompanied by pain in the location of the stump, and examination showed a diffuse, painful swelling in the pelvis extending upward into the abdomen; the appetite was poor, and the patient became emaciated. After 2 or 3 months these symptoms gradually subsided and complete recovery took place. Suppuration or discharge of the ligature was never noticed. Terillon had this experience with 4 cases of this series, but is unable to explain the cause of evident inflammation. He feels that he can rule out infection, and thinks it may possibly be due to mortification (?) of the pedicle.

A. Brenner, contributes to the technique of gastro-enterostomy (*Wein. Klin. Woch.* 1892) two cases of inoperable carcinoma of the pylorus, in which he found it necessary to perform gastro-enterostomy. His method was the following: After making the incision he passed the right hand behind the colon in the region of the flexura-duodeno-jejunalis, pushing forward the great curvature of the meso-colon, and with this the ligamentum gastro-colicum; he then sutured these together with silk sutures, selecting a point in which there were present blood vessels. Making a vertical incision, between sutures he drew through it the upper loop of the jejunum. He united this loop of the jejunum with the anterior wall of the stomach, immediately above its greater curvation. The intestinal loops lay in their normal position while the transverse colon with its ligamentum gastro colicum was freely movable since the latter was situated close to the greater curvature.

One patient survived the operation, but died two months later, of carcinomatous cachexia, the second died 20 hours after the operation. This method recommends itself by the ease by which it can be performed.

Periscope.

THERAPEUTICS.

EFFECTS OF MEDICATED INHALATIONS.

Dr. A. Irsai, of Buda-Pesth, (*Lancet*), has made some instructive laboratory observations on the effects of the inhalations of various substances on the lungs and air-passages. Inhalation of air impregnated with the vapor of oleum terebinthinæ produced distinct pallor of the lung tissue, due, doubtless, to spasmodic contraction of the pulmonary capillaries. Oleum juniperi and oleum pini sylvestris produced similar results, but less in degree. Oleum eucalypti, oleum anisi, oleum menthæ and menthol, similarly inhaled, produced scarcely any change in the color of the lung-tissue. Creosote, thymol, and in a still greater degree guaiacol, produced redness, with great hyperæmia of the lungs. From these observations Dr. Irsai concludes that in acute catarrhal affections, with swelling, hyperæmia, and profuse secretions, those substances which produce anæmia of the lungs should be chosen, while in chronic torpid conditions, or in phthisis, where the supply of blood and the nutrition of portions of the lung are defective, substances which induce hyperæmia should be used. With any tendency to hæmorrhage creosote or guaiacol may prove dangerous.—*International Medical Magazine.*

SOMNAL.

Dr. Memmo (*La Riforma Medica*, No. 100, 1892) has given somnal in fifty-three cases seventy-five times, administering it in a syrup of oranges or peppermint:

℞ Syrup of peppermint, q. s.
Aquæ destillatæ..... gms. 100
(℥iijss).
Somnal..... gms. 2–5
gtts. xxx–℥jss).

Given to patients in the morning it produces a calm and restful day. When administered towards evening it quiets mental over-excitement (as in mania), alcoholic excitement and other psychoses, producing on an average a sleep of four to six hours' duration. No disturbance either of the digestive, circulatory or respiratory systems were observed, hence the remedy may be considered as innocuous. In many cases it was better tolerated than chloral, and in some better than sulfonal or tetranal. In women it exerts the same action, contrary to the assertions of Umpfenbach. It is very useful in insomnia due to hysteria, tuberculosis, and heart diseases in which there are no contra-indications It was also of service where all the hypnotics, as chloral, sulfonal and morphine, had been given without success. Only in rare cases was there observed, in the morning, a headache or vomiting—a very rare circumstance.—*Cincinnati Lancet-Clinic.*

POPULAR DELUSIONS ABOUT TONICS.

The Boston *Journal of Health* sounds the following warning on this subject which it would be well to heed:

Probably for no other class of remedies is there so great a demand as for those tonics that are commonly called appetizers. These are all more or less bitter, and are considered incapable of harm. As generally used, however, they do far more harm than good. They excite a feeling of hunger, it is true, but unless the doses are smaller than the layman unadvised is likely to take, they are sure not only to retard digestion, but to irritate the stomach and more or less upset the organs intimately associated with it.

He who feels that he needs an appetizer in the form of medicine, instead of buying tinctures, extracts, or other prepared solutions, will do well to obtain of a druggist one ounce of the dried herb, thoroughwort. This should be put in a pint of boiling water, allowed to stand for two hours, and then strained. After which it should be stored in an ice chest, or other cool place. The dose is two tablespoonfuls three or four times a day. Thoroughwort is one of the best of the simple bitters. and has a mild tonic effect, especially in dyspepsia and general debility.

The prepared drugs that are most often used as appetizers are the tinctures of gentian and colombo. These are generally combined, and to them is frequently added the syrup of ginger. Such preparations

are almost always taken in much too large doses, and instead of improving digestion they really impair its powers. Compared with thoroughwort their cost is very much greater; yet the herb tea has a better effect and when taken as advised is incapable of harm.

Of so-called strengthening tonics, quinine or some form of iron is generally resorted to by laymen. In certain conditions of the system these agents act well; but, without doubt, in nine cases out of ten in which they are used they are not needed; and not infrequently they do harm. It is a positive fact that there is not a single tonic in the way of medicines that a person could safely and wisely take unadvised, did he seek to recover lost strength.

Nor is there a tonic known to physicians that is likely to prove strengthening in a very large proportion of cases of debility. There are a variety of drugs that will stimulate and give a healthier tone to certain parts of the system, and, perhaps to the entire system, but as a rule they are very powerful, and a person who has not an intimate knowledge of them, their nature and effects, would be sure to injure, if not kill himself, were he to trifle with them. These agents only do in selected cases. Strychnia, for instance, might do one patient good, while another, presenting to the uninformed much the same symptoms, would be made much worse by it. The simplest of all the strengthening tonics is iron, and yet, contrary to the popular idea, this can only be used in a small proportion of cases of debility.

In a word, those persons who seek to regain lost strength by means of tonics, and without medical advice, must rely upon good, wholesome food, pure air, and judicious exercise; because, were they to trifle with drugs, not only would they gain nothing by it, but would be sure to do themselves very great harm, although by the way, they might not at the time recognize the harmful effects of the experiments.—*American Analyst.*

TREATMENT OF DIPHTHERIA.

Kohts and Asch report a large number of cures from the use of papoid in diphtheria. The former has treated several hundred cases with great success by the following method: Ten grains of the papoid are dissolved in half an ounce of water. This solution is painted on the diphtheritic membrane every fifteen or twenty minutes with a soft brush. The membrane disappears rapidly.—*National Med. Review.*

ANTIDOTES FOR POISONS.

USEFUL HINTS TO GIVE PATIENTS FOR EMERGENCIES.

In cases where the other articles to be used as antidotes are not in the house, give two tablespoonfuls made mustard in a pint of warm water. Also give large draughts of warm milk or water mixed with oil, butter, or lard. If possible, give as follows:

For Bed-Bug Poison Corrosive Sublimate, Blue Vitriol, Lead Water, Saltpetre, Sugar of Lead, Sulphate of Zinc Red Precipitate, Vermillion,	Give milk or white of eggs, large quantities.
For Fowler's Solution, White Precipitate, Arsenic,	Give prompt emetic of mustard and salt, tablespoon of each; follow with sweet oil, butter, or milk.
For Antimonial Wine, Tartar Emetic,	Drink warm water to encourage vomiting. If vomiting does not stop, give a grain of opium in water.
For Oil Vitriol, Aqua Fortis, Bi-carbonate Potassa Muriatic Acid, Oxalic Acid.	Magnesia or soap dissolved in water, every two minutes.
For Caustic Soda, Caustic Potash, Volatile Alkali,	Drink freely of water with vinegar or lemon juice in it.
For Carbolic Acid,	Give flour and water or glutinous drinks.
For Chloral Hydrate, Chloroform,	Pour cold water over the head and face, with artificial respiration, galvanic battery.
For Carbonate of Soda, Copperas, Cobalt,	Prompt emetics; soap or mucilaginous drinks.
For Laudanum, Morphine, Opium,	Strong coffee followed by ground mustard or grease in warm water to produce vomiting. Keep in motion
For Nitrate of Silver,	Give common salt in water.
For Strichnine, Tinct. Nux Vomica,	Emetic of mustard or sulphate of zinc, aided by warm water.

BEEF JUICE.

Where it is necessary to give an invalid just the juice of beef, broil say a half pound for just a moment over a quick fire, then score it thoroughly, put it in a lemon squeezer, and press the juice into a cup, add a grain of salt, stand the cup in hot water for a moment until the juice is warm and use it immediately. This is more tasty and appetizing than beef tea.—*Col. Med. Jour.*

MEDICINE.

HÆMORRHAGE FOLLOWING THE EXTRACTION OF TEETH.

A. A. Burns (*Amer. Jour. Dental. Sci.*) says:

After a tooth has been extracted, the blood comes spontaneously and flows for an unlimited time in a degree such as will not cause any alarm. Usually after five minutes flowing there is a process of clotting taking place. This stage in the flow of blood is called primary hæmorrhage, and is usually all that the surgeon has to deal with, as the blood generally stops flowing as soon as the clot is formed; but sometimes after the clot has formed, even eight or ten hours after, there appears a flow of blood more rapid than the preceding and in a somewhat pulsating manner. This is known as secondary hæmorrhage. When this occurs, it is first advisable to remove the clot which has formed in order that a more definite application may be made.

Take a strong solution of alum, formed by dissolving alum in warm water, and first applying with a syringe; after a few applications in this manner, pellets of cotton may be saturated with the solution and forced into the socket. Some think that a greater effect is produced by applying powdered alum to the pellet after saturation. This may make the action more powerful. However, if this is not effectual, it is well to repeat the treatment; or should we prefer another treatment of this, the wound may be syringed with peroxide of hydrogen, which is said to have an immediate action causing a clot which is not soluble in the blood. Pellets may also be saturated and inserted into wound.

If these methods are not successful, stronger styptics must be resorted to. The following are classed among the more powerful for local application: Nitrate of silver, tannic acid, subsulphate of iron, perchloride of iron, persulphate of iron, gallic acid, tincture of ergot. Care must be taken that no agent is employed as a styptic which will in any way destroy tissue.

Nitrate of silver may prove successful in some cases, but it causes destruction of the tissues with which it comes in contact, and also forms a clot which is soluble in blood. Perchloride of iron acts in much the same manner.

Persulphate of iron is the best of the iron compounds. It acts readily, does not destroy tissue, and after action presents a clean looking wound.

Tannic acid is an excellent styptic, and answers well in connection with a compress of lint or cotton. Also gallic acid. The clot formed by these is not soluble in blood.

TOOTHACHE.

Charles C. Crittenden (*Dental Review*) says: Toothache results from many different causes:

From irritation of living pulp due to sensitive dentine or full exposure; from congested pulp; from dead and putrescent pulp; from involvement of surrounding tissue from continuity and contiguity when poisonous gases in confinement force their way out of the roots.

Having located the trouble, it must be reached and fully discovered, to know its true character. It may prove a mere surface of inflamed dentine, with no real pulp involvement, in which case simply cleansing, stimulating with eugenol or creosote and then perfectly covering with cement, will command the situation until you are ready to make a permanent filling—always first having allayed the pain. It may transpire that a cavity reaches very nearly to the pulp chamber—so near that a turn of an excavator would expose the pulp. Then comes in play your best judgment as to what to do. The age, health, etc., of patient, general conditions of mouth and teeth are all to be considered. It is always best to make haste slowly though and do nothing you cannot undo. The first thing to accomplish is relief from pain. In this case, as in that of full exposure with hæmorrhage from pulp, a careful removal of débris, cleansing and drying of the cavity and application of a pledget of cotton dipped in eugenol and then touched in iodoform crystals and acetate of morphia powder, the whole placed in actual contact and sealed with bibulous paper saturated with sandaric varnish or chloropercha without pressure, will bring your patient back next day happy and relieved, ready for what you may deem best to do further. Quick thermal changes are excellent helps in finding out "what's the

matter." If colder temperature produces quick pain, the pulp is surely in full life, and the above mentioned conditions and course of treatment are indicated.

If, on the other hand, cold produces relief, and heat a welling-up or paroxysmal pain, you will diagnose at once a congested pulp, that is, one where the application of heat induces an increased flow of arterial blood into the pulp tissue which the capillaries are unable to handle and return promptly. This pressure of engorgement produces paroxysmal pain, which will be relieved by quick wounding and bleeding of pulp, followed by the same dressing mentioned above. A stage further on, you will find—especially in teeth of more than one root—a portion of the pulp converted into pus, which, on uncovering and venting, will often enable you to *see* the heart pulsation welling through the opening of chamber, thus showing that a portion of the pulp further up the canals is still living. Depletion, cleansing and the same dressing before mentioned means relief to your patient. By the term *cleansing*, I mean the free use of $H_2 O_2$ with the Dunn syringe.

NEURALGIA.

For six months a lady, at frequent intervals, had terrible neuralgia of the shoulder, going down to the forearm. I asked her if her teeth had been examined, and she said that they had never been suspected by her physician as the cause of the trouble. I found under the free margin of the gum, on the buccal side of the wisdom-tooth, a cavity that penetrated to the pulp chamber. It was such a difficult place to get at, and she had suffered so long, I advised her to have it out, and after the extraction of the tooth the neuralgia disappeared from the shoulder.

I have seen other cases of neuralgia where, apparently, a very slight thing caused it all. I remember one case of a patient suffering with intense neuralgia, where there were no cavities in the teeth, except what had been well filled, but there was a noticeable recession of the gums, which I decided was the cause, from their hyper-sensitiveness. The exposed parts of the teeth were treated with a little nitrate of silver, which removed the sensitiveness and also the neuralgia.—*Dr. Smith, in Int. Dent. Jour.*

THE BEST NUTRITIVE ENEMA.

Ewald, as a result of experiments, found that eggs, even though not peptonized, were to a considerable extent, absorbed by the rectal mucous membrane. According to the *Mercredi Medical* for April 1st, Huber, of Zurich, has recently repeated Ewald's experiments in Professor Eichorst's clinic, and announces that the absorption of raw eggs is greatly aided by the addition of common salt.

The salt is well borne, and causes, as a rule, no irritation of the bowel. He considers that eggs beaten up with salt, in the proportion of fifteen grains to each egg, are the best for nutritive enema. His method of procedure is as follows: Two or three eggs are taken, and thirty to forty-five grains of salt are added. They are slowly injected by means of a soft rubber tube, carried as high up the bowel as possible. Three such enemata are given daily. An hour before each enema the rectum is cleaned out by means of a large injection of warm water.—*N. Y. Med. Times.* October, 1892.

ORIGIN OF INSANITY.

The following are the conclusions of Dr. M. M. Buck (*Canad. Pract.*) on this subject:

1. All mental faculties arose each in its time, and they are of all ages, many of them being quite modern.

2. The date of birth of a faculty in the race may be judged by the age at which it appears in the individual, and its more or less universality in the race.

3. The stability of a faculty in the individual depends upon its age in the race; the older the faculty the more stable it is, and the less old the less stable.

4. Consequently the race whose evolution is the most rapid will be the most subject to breakdowns.

5. Those functions, in any given race whose evolution is the most rapid will be the most subject to breakdowns.

6. In the more progressive families of the Aryan race, the mental faculties have for some millenniums last past developed with great rapidity.

7. In this race the large number of mental breakdowns, commonly called insanity, are due to the rapid and recent evolution of those mental faculties.—*West. Med. Reporter.*

GYNECOLOGY.

ON PLUGGING THE CERVIX UTERI INSTEAD OF VAGINA IN UTERINE HÆMORRHAGE.

Plugging the cervical canal in cases of severe uterine hæmorrhage (other than postpartum) will be found more effectual and much more comfortable to the patient than the older method of plugging the vagina. The want of a simple means for completely filling the cervical canal has long been felt, but I think it will be found a simple matter by the use of an instrument constructed as follows: It is simply an improved form of sliding depositor, the difference being that, instead of the canula being pushed forward on the rod, the latter is made to retreat into the canula by the pressure of the fingers on projecting side-bars, and so the cotton plug dressing on the top of the rod is pushed home with certainty into the cervix. It may be urged that in cases of metrorrhagia or very early abortion a sponge-tent or sea-tangle would be an easier mode of treatment, and quite as effectual. But besides the inconvenience of having to place a tampon in the vagina as well, to insure retention of the tangle or sponge, we have also the great liability to sepsis, and I certainly prefer being on the safe side. The size of the os being determined by digital examination, a piece of absorbent cotton is to be neatly wound round the projecting point of the instrument for about two inches of its length, and thickly enough to fully fill the canal.

The cotton plug is then to be saturated with whatever antiseptic styptic the operator prefers—saturated solution of alum in glycerin, iodine tincture or turpentine; but I have a strong dislike for iron. A large-sized cylindrical speculum is then introduced and the os and cervix syringed with hot water, so as to wash away all clots. The cervix is then to be steadied with a tenaculum, held in the left hand, while the plug is passed into the cervix, with the depositor held in the right, as far as possible, and, on pressure being made on the side-bars while the thumb supports the base of the instrument, the plug is pushed off the rod and the depositor withdrawn. The whole operation can thus be done without assistance. If the plug has been made of the proper dimensions, which, of course, must depend on the judgment of the operator, and inserted fully into the cervical canal, there need be no anxiety as to the result, and the antiseptic and astringent action of turpentine, which I generally use myself, leaves nothing to be desired. The plug may be safely left till expelled by uterine action, when, if the hæmorrhage continue, the practitioner will be prepared to adopt other measures—washing out or curetting the uterus, or both. With a sponge-tent or sea-tangle in the womb it is always an anxious time for the practitioner, but with the plug properly in position he can take his own time about further interference. —Dr. Alex. Duke in *Satellite*.

PERIODIÇAL INTERMENSTRUAL PAIN.

In an article upon this subject (*Amer. Jour. Obstetrics*, October), Dr. Chauncey D. Palmer, of Cincinnati, Ohio, draws the following conclusions:

1. Periodical intermenstrual pain is a comparatively rare disease.
2. The disease is ovarian, not uterine.
3. This ovarian disease is an oöphoritis or peri-oöphoritis, or both.
4. The chief underlying exciting cause of these attacks of pain is the morbid obstruction to the extrusion of the contents of the Graafian follicles.
5. Many other morbid conditions, uterine, peri-uterine, or ovarian, may be associated with the oöphoritis or peri-oöphoritis, but their presence is not the cause of the essential symptoms.
6. Cure is effected only by overcoming the disease of the ovary or by its extirpation.

In regard to treatment he has found most benefit during the attack from the tincture of cannabis indica. Opiates he considers as objectionable here as in other forms of dysmenorrhœa. During the intervals reliance is to be placed on the most active so-called "alterative remedies;" mercuric bichloride, potassium iodide, ammonium chloride, and gold and sodium chloride, administered for a long time. The bromides are not to be ignored.

Local galvanization, with the anode to the vaginal vault, behind and to either side of the uterus, according to the ovary especially affected, occasionally changing to the secondary faradic current—the current of tension—has been of signal service to him.

Of course all manifest local disease, as well as errors of the general health, require attention, according to the kind and degree of the morbid complication. I have seen

good results following topical applications of ichthyolated boroglyceride. Counter-irritation before and during the periodical attacks of pain is sometimes efficacious.

Kreuznach waters, in Germany, so efficacious in the cure of some female pelvic diseases, would appear especially useful in this disease. We all recognize that a change of climate and scenery, with rest and its diversion, and massage, do as much in many of these conditions as the mineral waters themselves.

Finally, after a failure of medicinal and hygienic measures, faithfully tried, oöphorectomy is clearly indicated in bad cases. While oöphorectomy has been a greatly abused operation, particularly for many seeming reflex nervous diseases and for dysmenorrhœa, we are forced to accept the operation at times for this disease, but only as a last resort.

HYGIENE.

LIGHT IN THE SICK ROOM.

Dr. B. W. Richardson, in the course of a lecture on "Disease and How to Combat it," remarks:

A custom still prevails, despite all our sanitary teachings, that the occupants of a sick-room in the private house should be kept at all times in a darkened room. Not one time in ten do we enter a sick-room in the daytime to find it blessed with the light of the sun.

Almost invariably, before we can get a look at the face of the patient, we are obliged to request that the blinds be drawn up, in order than the rays of a much greater healer than the most able physician can over hope to be, may be admitted. Too often the compliance with this request reveals a condition of the room which, in the state of darkness, is almost inevitably one of disorder everywhere; foods, medicines, furniture, bedding, misplaced; dust, stray leavings in all directions.

In brief, there is nothing so bad as a dark sick-room. It is as if the attendants were expecting the death of the patient. And if the reason for it is asked, the answer is as inconsistent as the act. The reason usually offered is that the patient cannot bear the light; as though the light could not be cut off from the patient by a curtain or screen, and as though to darken one part of the room it were necessary to darken the whole of it. The real reason is an old superstitious practice, which once prevailed so intensely that the sick, suffering from the most terrible disease—smallpox, for instance—were shut up in darkness, their beds surrounded with red curtains during the whole of their illness. The red curtains are now pretty nearly given up, but the darkness is still credited with some mysterious curative virtue.

A more injurious practice really could not be maintained than that of darkness in a sick-room. It is not only that dirt and disorder are results of darkness—a great remedy is lost. Sunlight is the remedy lost, and the loss is momentous. Sunlight diffused through a room warms and clarifies the air; it has a direct influence on the minute organic poisons—a distinctive influence which is most precious—and it has a cheerful effect on the mind. The sick should never be gloomy, and in the presence of the light the shadows of gloom fly away. Happily, the hospital ward, notwithstanding its many defects—and it has many—is so far favored that it is blessed with the light of the sun whenever the sun shines. In private practice, the same remedy ought to be extended to the patients of the households, and the first words of the physician or surgeon on entering the dark sick-room should be the dying words of Goethe: "More light! more light!"—*The Druggist and Chemists' Gazette.*

DIGESTIBILITY OF BEEF AND FISH.

Popoff's researches on the digestibility of beef and fish after different methods of preparation show that both are more digestible in the raw state than when cooked. The longer beef is cooked, the more indigestible it becomes. After the same manner of preparations, except smoking, beef will, in general, be better digested than fish. Smoked fish is more digestible than raw or cooked. On the other hand, smoked beef is peptonized with more difficulty than if in some other condition, perhaps because the indigestion is impaired by the strong salting which precedes the smoking.—*Med. Review.*

THE SANITARY CONDITION OF CHICAGO.

"It is now well known abroad that Chicago is a pest-hole, and unless something is done mighty quick to improve matters, the expected millions at the World's Fair will fail to materialize, for, as the *Medi-*

cal Record puts it, 'people can find other and more pleasant means of suicide nearer home.'"

From the *Pacific Medical Journal* for August of this year, we take the above quotation. So many similar statements have appeared in different medical journals, that we feel it important to ascertain the exact state of affairs. With this end in view, we have requested the present, and the late, Secretaries of the Illinois State Board of Health to give us a statement, for publication, of the present sanitary condition of Chicago and of the sanitary measures proposed in view of the World's Fair.

We regret that both of these gentlemen found themselves too busy and too unwell to comply with our request.

We have, therefore, no reliable information on the subject, but, personally, we feel confident that the unparalleled energy, industry, good sense and intelligence of Chicago, will leave nothing undone that ought to be done to put the city in first-class sanitary condition.—*The Annals of Hygiene.*

OBSTETRICS.

QUININE AS A PARTURIFACIENT.

To strengthen uterine pains there is nothing comparable to the quinine sulphate in ten or fifteen grain doses which is always accessible and easily administered. In suitably chosen cases it never disappoints. Its characteristic effects may be observed an hour after administration, pain recurring more frequently and with progressively increasing power; fretfulness and despondency yielding to confidence and earnestness of effort on the part of the woman. Where the labor was complicated by placenta previa, dilatation of cervix was promptly achieved by a dose of quinine, permitting entrance of hand, and thus promoting speedy delivery. In other cases, after controlling convulsions occurring before term, where prior to eight months there is apt to be a lack of energy, quinine has taken the place of forceps, terminating labor without accident. In short, whenever in the second stage of labor the natural effort seems inefficient, pains weak and frequent, or moderate and infrequent, give without delay ten or fifteen grains of the salt, and nineteen times in twenty labor will be speedily brought to a close. In a practice of twenty years I have not had occasion to give a single dose of ergot before the expulsion of the after-birth, though for many years it has been my habit to administer a half drachm or a drachm afterward.

EFFECT OF ERGOT.

Dr. Meigs says: If an ergotic pain is produced to last thirty minutes, in a case where the placenta is on the fundus uteri, and to be jammed for thirty minutes against the child's breech, without an instant of relaxation, who can doubt that its circulation is either wholly or nearly abolished, and that when the child emerges at last from the mother's womb, it will emerge quite dead, or in a profound asphyxia from the long supression of its placental circulation? Multitudes of children are born dead from this very cause, by the imprudent exhibition of a medicine, *which as certainly excites spasm of the womb as nux vomica does of the other muscles of the body.*

THE IMPORTANCE OF EXAMINATION OF THE GENITAL TRACT DIRECTLY AFTER LABOR.

In a short paper sometime since I endeavored to point out the obvious advantage of flushing the uterine cavity with hot water directly after delivery, and my reason for adopting such a proceeding.

I now wish to draw attention to the still more important point of making a close examination of the genital tract for any injury which may occur (more especially in the primiparæ during the process of parturition) by both visual and tactile examination. The cervix uteri is frequently torn, the edges of the os lacerated, and the vaginal walls injured, leaving, perhaps, the perineum intact, and so the conclusion is oftentimes come to that "all is well," while considerable mischief may have taken place unobserved.

By the hot water flushing we get rid of several sources of danger, and, if a thorough examination is then made for vaginal or cervical injuries, it will be a comparatively easy matter, when such are found, to draw together the torn surfaces in severe lesions with catgut sutures, and cauterize the parts in minor ones with strong carbolic acid, thus leaving the parts concerned in a better condition for repair and less liable to absorb. It will be obvious that at no other time subsequent to

labor have we a better opportunity.

No objections will be raised by the patient, and acting on the proverb, "a stitch in time saves nine," may save her from septic absorption with all its train of untold misery.

The comfort to the conscientious practitioner's mind (when such lesions are found) by treating them at once is no small recommendation for the adoption of this proceeding, while the no less pleasurable disappointment of finding that none exist (and which could not have been determined without examination) will also commend itself. As a general rule, the uterus is not washed out directly after labor, nor any examination made, except of the perineum. The consequence is, that in many cases where septic symptoms develop, the true cause is never known, whether depending on a piece of membrane left to decompose in utero (which should have been removed by flushing before the binder was applied), or a lacerated cervix never discovered, or some tear in the vaginal surface, allowed, perhaps, for days subsequent to labor to absorb the morbid products of conception, and so, by permeating the patient's system, bid defiance to the best directed efforts of the practitioner. I am persuaded that in nine cases out of ten the septic symptoms in the lying-in patient are due to the causes I have pointed out in this paper. I may here allude to the danger (where no examination has been made of the genital canal) of endeavoring to combat the symptoms of septicæmia by syringing with corrosive sublimate solution, for should a torn or abraded surface exist (which, in my opinion, is almost a certainty) such surface, which, in the first instance, took up septic matter, is quite capable, as proved by some cases of severe burn treated with the corrosive solution, of absorbing it, and so contributing to, if not actually causing, the patient's death.—Duke, *Medical Press and Circular.*

VINUM IMPECACUANHÆ IN WEAK LABOR PAINS.

Stillmark (*St. Petersburger Medicinische Wochenschrift*, No. 10, 1892) contributes the notes of a case of uterine inertia in which the contractions were re-established by the administration of wine of ipecac. The patient was a IV-para, with a history of easy previous labors. Three weeks before the presumptive termination of her labor the membranes spontaneously ruptured, and one or two weak pains were experienced. The next morning Stillmark examined her and found head presenting in second position, os admitting two or three fingers. There were no pains. The patient was placed in a bath. Nine hours later, as the pains had not yet occurred, warm vaginal douches were applied without result. During the following night patient slept. Next morning, after a bath, warm vaginal irrigations were again used, and gentle massage to the uterus. As all this failed to establish the pains, wine of ipecac was administered in a fifteen-drop dose. Half an hour afterward the patient exclaimed that her abdomen felt hard. At 1.30 p. m., fifteen drops were again administered. In three quarters of an hour after the second dose strong normal pains began. In the evening the pains were weaker and about 10 o'clock had almost ceased. Five drops were now given, as some vomiting had occurred after the second dose. Energetic labor pains were soon established, and at 12 o'clock the child was delivered. The placenta followed.—*University Medical Magazine.*

NEWS AND MISCELLANY.

A SOURCE OF DANGER.

Confections of santonin, variously known as worm lozenges, worm troches, and worm confections, have been employed as domestic remedies for intestinal worms in children as far back as we can remember. It is a popular form of administering this well-known anthelmintic, and is resorted to by anxious mothers, without fear of untoward effects, just so soon as they have diagnosed "worms" to their own satisfaction. And when an accident happens, such as has been recorded recently, where a child two and a half years old is reported to have died from the effects of eating ten cents worth of the troches, it attracts but little attention, and the sale of the lethal confections goes on as briskly as before.

As found in the shops, the worm troche is a small cake of sugar, oval in shape, usually of a pinkish color and flavored with wintergreen. It cannot be easily distinguished from the ordinary confectioner's sweetmeat, and is altogether a very inviting-looking morsel. It is this inviting

appearance and the ease with which the troches may be procured by any person on demand which renders them such a source of danger. They are sold at the rate of ten cents per dozen, and when it is remembered that each troche contains exactly one-half grain of santonin, it will be readily understood how accidents may happen. Carelessness on the part of the child's guardians has been responsible for the majority of casualties reported from this source, and the child has in most instances been allowed to help itself to the toxic dose.

Some reform in the sale of domestic remedies of this description is evidently needed. The sale of santonin troches, in particular, should be restricted; and although a somewhat extreme measure, it would be in the interests of public safety to place santonin on the "poison schedule" and prohibit its *indiscriminate* sale in any form. In the meantime, it is to be hoped that druggists themselves will take sufficient interest in the matter to see to it that parcels of santonin troches are properly labeled before they are sent out.—*Pharmaceutical Record.*

RAILWAY SURGERY AT THE PAN-AMERICAN MEDICAL CONGRESS.

A Section of Railway Surgery of the Pan-American Medical Congress has been organized with Dr. C. W. P. Brock, of Richmond, Virginia, as Executive President. A full list of officers has been provided for each of the constituent countries. At the Eleventh Annual meeting of the Wabash Railway Surgical Association—the first organization of the kind—Dr. C. B. Stemen, of Fort Wayne, was by unanimous resolution requested to prepare a paper on "Organized Railway Surgery" and read the same before the Section on Railway Surgery of the Pan-American Medical Congress. At the same meeting Dr. Hal C. Wyman, of Detroit, offered the following which was unanimously adopted:

Resolved, That each member of this Association solicit his Congressman to interest himself in legislation in favor of the Pan-American Medical Congress.

EFFECT OF POSTURE ON HEALTH AND SYMMETRY,

In a paper devoted to this subject Dr. Eliza M. Mosher recapitulates as follows (Brooklyn *Med. Jour.*): There are three fundamental postures in which the body in the upright equilibrates. A certain amount of muscular force is required to retain it in any of these positions. The first posture is not practicable as an habitual one, because it does not admit of alternation in the use of the lower extremities. The second places the body in the most symmetrical attitude it can take, and at the same time permits the alternate use of its supports. This is a posture not naturally chosen, but easily acquired by training. The third, which is the favorite posture of mankind, is harmful in its tendencies, both as regards its influence upon the symmetry of the body, and the economic and healthful use of its complex machinery. Its adoption then should be deprecated, and especially so in our schools and stores. The shape of the body in the sitting posture is greatly dependent upon the position of the arms and head. The one which best maintains the symmetry of the trunk, and therefore is most healthful, is that in which the spinal column balances upon the pelvis, with the arms at the sides and the head upright. The posture is the one which the body should be trained to assume in the schoolroom, the workshop and the carriage.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY FROM NOVEMBER 13, 1892, TO NOVEMBER 19, 1892.

Leave of absence for one month, with permission to apply to the proper authority for an extension of one month, is granted Major Calvin DeWitt, Surgeon, U. S. Army.

The leave of absence for (7) seven days granted Captain W. W. R. Fisher, Assistant Surgeon, U. S. Army, is hereby extended fourteen days.

First Lieutenant, Henry R. Stiles, Assistant Surgeon, (recently appointed) is assigned to duty at Jefferson Barracks, Missouri.

First Lieutenant, Paul F. Straub, Assistant Surgeon (recently appointed) is assigned to duty at Fort Riley Kansas.

First Lieutenant, Francis A. Winter, Assistant Surgeon, is relieved from duty at Fort Riley, Kansas, and assigned to duty at Fort Wingate, New Mexico.

First Lieutenant, A. E. Bradley, Assistant Surgeon is relieved from duty as attending surgeon, Hd-qrs., Dept. of the Platte, Omaha, Nebraska, and is assigned to duty at Fort Sully, South Dakota.

Captain Benjamin Munday, Assistant Surgeon, is relieved from duty at Fort Sully, S. D., and is assigned to duty at Fort Nebraska, Nebraska, for duty.

First Lieutenant, Harry M. Hallock, Assistant Surgeon, (recently appointed) is assigned to duty at Fort McPherson, Georgia, for duty at that post.

First Lieutenant, Robert S. Woodson, Assistant Surgeon, is relieved from duty at Fort McPherson, Georgia, and is assigned to duty at Fort Barrances.

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THE
MEDICAL AND SURGICAL REPORTER.

No. 1866. PHILADELPHIA, DECEMBER 3, 1892. Vol. LXVII—No. 23

Original Articles.

MEDICAL USE OF ERGOT.*

By KATHARINE MILLER, M. D.,
LINCOLN, ILL.

Ergot, like many others of our valuable remedies, began its therapeutic career in the hands of those outside our profession. It was in somewhat common use among German midwives as early as 1688. Nothing further was heard of it in medical circles until 1774, when mere mention again occurs. In 1777 M. Desgranges, of Lyons, began using it, and published several articles on its use during the following years. Before its use became common in France, however, Dr. Stearns, of New York, introduced it to the profession in this country. In 1820, Dr. Merriam, and 1825, Dr. Davis published articles on it. Thereafter its use in obstetric practice became common. Of its use in other than obstetric cases no mention is found until much later, and its general effect on the system seems not to have been carefully studied. Early observers concluded that "it acts on the uterus entirely through the nervous system; that its influence is septic, confined principally to the uterine organs, and the pulse is only secondarily affected, in consequence of the increased action of the uterus. In many cases it has appeared to diminish the frequency of the pulse." Dr. Hardy, from accurate notice of a large number of cases in which ergot had been administered, came to the conclusion that it diminished the frequency not only of the mother's pulse but also of the child's. With the spread of its use in obstetric practice and for other uterine difficulties involving hæmorrhage or other profuse discharges, a natural curiosity led some to try it in other diseases until in 1877 the United States Dispensatory mentions its trial in hæmoptysis, gonorrhœa, dysentery, diarrhœa, paraplegia, vesical and rectal paralysis or paresis, spermatorrhœa, hysteria and intermittent fever, and Dr. George B. Wood inquires: "May it not have the power of producing contraction in capillaries in general, or of interfering in some other way with the circulation of blood in the vessels as by the exertion of a direct sedative or paralyzing effect?"

Meanwhile, Dr. Samuel Wright had found the oil valuable as an anodyne external application in rheumatism and toothache, and as a styptic in wounds.

Most therapeutic works of reference of that time, however, dismiss, with a mere mention, all except the uses dependent upon uterine action, even pronouncing ergot without influence on man.

As late as 1841 prominent physicians utterly denied its effects on the parturient uterus. With longer use and experiment, however, the value of the drug had become gradually understood, but I have found no evidence of careful scientific study of its physiological action, beyond the effects on the uterus, earlier than about 1871, except those of Wright in 1839, and Bonjean in 1845, which are largely studies of its poisonous action in large doses on animals. The complexity of the substance has made it more difficult of study. Different methods of preparation have secured different extracts varying in constituents and effect, so that the details of its action admit of large latitude of argument and controversy. Probably the preparations representing the drug most completely are a reliable fluid extract, and Bonjean's ergotine, a well-prepared aqueous extract entirely different from the active principle which the name suggests. There is no longer doubt that ergot ex-

* Read before Illinois State Medical Society, 1892.

cites the vaso-motors and certain other nerves of the ganglionic system. Upon its effects upon the vaso-motors, most of its usefulness in general practice depends; though doubtless the effects on other nerves or centers must be considered in its action on the bladder, and, to some extent, on the walls of the intestines. It seems, indeed, to affect the motor nerves of unstriated muscle in general, probably through action on the nerve centers rather than on the peripheral nerves, though there is evidence that certain elements, especially those not found in the aqueous extract, affect the peripheral nerves. The most prominent effect, aside from its uterine action, is on the caliber of the arteries or arterioles which become markedly contracted under its action. This results obviously in a great rise of blood pressure. Accompanying this, and probably in part due to it, is a slowing of the heart-beat. Several experiments have shown this effect to be mostly due to action on the peripheral cardiac pneumogastrics. This slowing may amount to ten to thirty-five beats per minute, but rarely, if ever, is the pulse reduced below sixty. The amount of contraction of the caliber of vessels under the influence of vaso-motor stimulation is very great, and as the drug is not very rapidly eliminated, it has a certain persistency, requiring some time to relax completely when under control of full physiological doses. Ergot in toxic doses, as would be expected, causes a paralysis of the nerves, and arterial dilatation follows. It is probably due to exhaustion of the nerve centers by over-stimulation, but of course the factor of muscular exhaustion with lack of irritability and failure to respond to nerve influence may well be also a factor.

That ergot influences other unstriated muscles than those of blood vessels and the uterus is beyond question. In large doses it excites in animals very active intestinal peristalsis. It is probable that decidedly large doses are needed to produce this effect and no data are given pointing to any usefulness from this section in the treatment of disease, though it would seem that in peritonitis or enteritis with congestion and threatened intestinal paralysis it might be indicated. Its effect on the muscular structure of the bladder is more available, and here, as in the uterus, it seems to stimulate the sphincter muscle even more than those of the fundus. It is therefore useful in paralysis of the bladder, but more especially in paralysis or imperfect development of the sphincter vesicæ with consequent imperfect control of urine, as in the incontinence of childhood with undeveloped sphincter, and of age with atrophy of the muscles or exhaustion of the spinal centers through disease. The weight of evidence showing that these results are in part due to peripheral action, the use of ergot in full doses is rational, if not otherwise contra-indicated, where there is paralysis vesicæ or paralysis of the sphincter vesicæ from spinal injury affecting the vesical centers in the cord. The possible contra-indication would lie in the effect of the treatment on the primary injury.

Ergot has been considerably employed with satisfactory results in various diseases of the spinal cord. Its use is recommended in spinal congestion by no less authorities than Brower, Hammond, Spitzka, etc. It is true that testimony is not unanimously favorable. So prominent a therapeutist as Bartholow says that ergot induces an anæmia of the arterial distribution, an ischæmia properly speaking, but the blood that is driven from the arterial side accumulates on the venous side, hence while the arterial supply may be reduced, the veins of the spinal canal are unduly distended. This statement, however, seems based on unusual conditions, since the increased arterial pressure could not result in venous distention unless it were sufficient to react through the pulmonary circulation and the right heart. This could only happen in cases of insufficiency in the left heart from lesion of the aortic valves permitting the increased blood pressure to be so transmitted backward. It appears evident, however, that so long as the heart continued fully competent for its work the lessened arterial supply must result in lessened venous supply, allowing over-distended veins an opportunity to recover themselves. The danger of regurgitation acting injuriously is lessened by the fact that the vaso-motors of the lesser circulation under normal conditions are less promptly acted on by ergot than those of the systemic circulation, so that the dosage of ergot sufficient to cause active contraction of the systemic arterioles with great increase of blood pressure there would have less effect on the pulmonary

circuit. It must be remembered too, that venous tone is increased by ergot, so that the veins are not entirely helpless in the face of the possible catastrophe. The complexity of these relations and the possibility of error in the use of this as of other powerful remedies, merely show that the physician who is a successful therapeutist must mix and apply his medicines as the artist Opie mixed his colors, "with brains."

Ergot has been used in spinal scleroses for relief of lightning pains with good success, but there is reason to fear that in such cases it merely operates by hastening that pathological destruction of elements which would otherwise after longer delay, have secured the same result, relieving nerve irritation by securing starvation and extinction of the nerve elements. In acute congestion and inflammation of the spinal cord, and of the brain as well, ergot has an undoubted value, restoring the tone of vessels dilated or overcharged with blood, relieving the nerve elements from pressure and assisting in the return to normal conditions. In this way congestive hemicrania as well as other forms of headache attended with active or passive hyperæmia may be relieved.

The effect of the active contraction of vessels in other regions is equally favorable. It has been utilized especially in pulmonic congestions, pneumonic and otherwise. It is true that the pulmonary vaso-motor system seems less easily affected than the systemic, yet when a condition of vaso-motor paresis or vaso-dilator irritation (as the case may be) exists, the response is prompt and not attended with unpleasant symptoms from increase of blood pressure throughout the body.

The usefulness of ergot in pulmonary hæmorrhage has been recognized for some time. Its use to prevent the onset of hæmorrhage and even the slight escape of blood accompanying pneumonic congestion would seem to follow naturally but appears not to have been appreciated. Early in my practice a case occurred which proved an effective object lesson to me. A four year old child of a friend of mine was ill with apparently a simple catarrhal fever; as I sat watching her, the quickening breathing attracted my attention. Physical examination showed pulmonary congestion beginning. Cardiac depressants were promptly used and counter-irritation applied to the chest. Two or three hours passed with steadily quickening respiration and harder laboring heart marking the progress of the disease. It seemed as if the vessels of the lungs were paralyzed and filling to distention with blood. I reflected that ergot ought to control that condition and began using it; ten drops of the fluid-extract every fifteen minutes; then as the effect began to appear a dose each hour. In two or three hours more the child was out of danger, the heart beat slower and fuller, the labored, quickened breathing passed away and the case resolved itself into its former simple catarrhal condition. In few cases has the physician had the opportunity to act so promptly, but in many a case I have seen excellent effect in limiting such trouble when too late to entirely prevent it.

In certain cases of severe irritating cough accompanying the influenza of the past winter, ergot has been very useful. The condition appears to be an intense congestion of the bronchial mucous membrane without exudation; indeed the membrane is abnormally dry. At a meeting of the Brainard District Medical Society, Dr. Hurst of Greenview, reported a fatal case where atelectasis apparently occurred, there being seemingly absolute adhesion of the dry inflamed surfaces of the smaller air passages. Expectorants utterly failed to relieve these cases. Sedatives gave at most temporary relief. The cough was most trying to the patient. Believing the condition to be as described, I prescribed ergot freely and in the several cases where I used it, the result was a prompt alleviation of the extreme annoyance and a reduction of the condition to that of an ordinary bronchitis. The cases were too few to make broad statements therefrom, but they certainly point to the possible relief of a condition most difficult to control and of a really serious nature.

The effect of ergot on hæmorrhage wherever occurring is excellent, though it cannot act quickly enough nor probably are the muscular fibres capable of sufficient contraction to check hæmorrhage from very large vessels. In pulmonary hæmorrhage as mentioned, in renal or vesical or intestinal hæmorrhage and in many cases of cerebral hæmorrhage its good effects, if used in efficient doses, will be manifest. Even in passive hæmorrhage from venous obstruction, its action may at times be

reasonably invoked, especially if a rapidly beating heart with a low blood pressure is forcing more blood upon the congested area. By slowing the heart and encouraging more complete filling of the ventricles, the pulmonic circulation may be relieved with relief, hence, to the right heart and systemic veins. Through this action also ergot proves an efficient adjuvant to digitalis or other heart stimulants even in cases where no oozing of blood under venous pressure has yet occurred. A condition frequently met with is that of the intestinal hyperæmia accompanying diarrhœa, dysentery and enteric fever. As might be expected, ergot is most successful in the cases where a chronic congestion and diarrhœa follow an acute attack, where, in fact, the continuance of the discharge is due to the increased secretion caused by relaxation of the vessels of the intestinal mucosa with over-nutrition and increased activity of the secreting epithelium. In cases where a poisonous ptomaine exists, or where the intestine has become a culture tube for pathogenic bacteria, ergot will prove useless until these are removed. It must therefore, be combined with other remedies in acute dysentery when its use is indicated by the hæmorrhage accompanying the disease.

The occurrence of hæmorrhage is so much dreaded, the destruction of tissues following intense hyperæmia of certain regions of the intestines so well recognized in enteric fever that the use of ergot as a preventive of these unfavorable symptoms can but be logical. To wait until intestinal hæmorrhage occurs, or to allow intense hyperæmia to persist for days or weeks, is to invite an unpleasant issue. The remedy which promises help in such a case is equally willing to act as a preventive. Ergot in such cases is not comparable to the direct astringents which may be given later, in the hope of their reaching the diseased spot and exercising a local effect, nor is it open to the objection to their prophylactic use that they lock up the bowels with possibly poisonous materials within, which should pass off, checking even normal secretions and coating the bowels with more or less irritating or, at best, useless foreign material. Ergot does not check peristalsis like opium, but rather strengthens it, probably, and acting through the blood supply there is little risk of reducing the nutrition, and hence the secreting capacity, of the epithelium below the normal, nor does its use interfere with the use of other remedies which may be indicated. It helps to prevent the hypostatic pneumonia so much feared, and in the moderate doses available as a prophylactic measure it may be continued for some weeks without derangement of digestion.

It would prolong this paper too much to dwell upon its use in splenic enlargement and leucocythæmia, night sweats, aneurism, galactorrhœa, diabetes insipidus, etc., to enumerate all the various forms of disease to which its ability to cause contraction of the unstriated muscle and to slow the heart's action render it adapted.

In conclusion, therefore, let me affirm that ergot used in free doses within physiological limits has a wide field of usefulness in general practice, and to emphasize the value of its use as a preventive of hæmorrhage and other accidents due to vascular distention or rupture and liable to occur in a large number of diseases. That its efficient dose is often large, and that the long continued use of such doses or their use at all under some conditions where increased blood pressure is dangerous, has certain risks, should not be to a rational physician a reason for omitting from his armamentarium a valuable remedy.

References.—Ramsbotham's Obs. App. C., Edn., 1856; U. S. D., 1847 and 1880; Dunglison's New Remedies, 1856; Wood's Therapeutics, Edn., 1891; Bartholow's Mat. Med. and Ther., Edn., 1879; Phillip's Mat. Med. and Ther., 1879; Landois and Stirling, Physiology, 1886; Foster's Phys., 1880; etc.

DEAFNESS OF LONG STANDING CURED IN A FEW DAYS.*

DR. HOVENT,
BRUSSELS.

Chance often does wonderful things. More than one instance could be cited where it has powerfully assisted Nature in rendering futile the efforts that Art has made against her. In the remarks set down here, Nature, the *vis medicatrix*, was not opposed in her healing action, but

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alone she was impotent, and Art had only lent her questionable aid. Chance intervened, and, "did wonders."

In the beginning of last January, Prof. Verriest (de Louvain) recommended compressed air baths to one of his patients who had some affection of the respiratory organs. The patient was a young boy, and was usually brought for treatment by a friend. On the 8th of January his companion Rachel P., who was deaf, shared his air bath. After being shut up for two hours, on coming out, the girl told me joyously that under the bell she had heard perfectly well, and that at that very moment she could hear better than usual. After having found that she heard the ticking of a watch at the distance of seven cm. only, with both ears, I begged her to send her parents to me, in order to find out more about her affliction. On the 10th of January the mother came to my office, she had tried everything she told me, which might cure her daughter, she could could do nothing more. She had consulted specialists who had told her that compressed air might be beneficial; one had just procured for her a little apparatus, by which the drum could be massaged; this was the only remedy she still intended trying. These details were very important for me, since the last specialist consulted had advised massage of the drum, he evidently thought it was affected. I blindly accepted this diagnosis and also advised massage, not however by a portable apparatus, but soft, continuous, uniform and progressive, such as only compressed air baths can produce. The treatment was begun on the 10th of January and after sixteen seances given in the course of eight to ten days, the cure was complete.

Jan. 8th. After the first ordinary seance *aëro-therapique* Miss P. hears the ticking of a watch at a distance of 7 cm.

Jan. 10—	After	1	special	seance	9	cm.	r. ear,	8	cm. l. ear
" 11—	"	1	"	"	11	"	"	10	" "
" 12—	"	2	"	seances	14	"	"	13	" "
" 13—	"	2	"	"	18	"	"	16	" "
" 14—	"	1	"	seance	22	"	"	18	" "
" 17—	"	1	"	"	20	"	"	17	" "
" 18—	"	2	"	seances	30	"	"	22	" "
" 19—	"	2	"	"	42	"	"	30	" "
" 20—	"	2	"	"	46	"	"	46	" "

On the 20th of January the little girl could hear as distinctly as her mother, and as the other people about her. A remarkable incident was that on the 13th of January the mother refused to have her child treated any longer, because the little girl had said she could not only hear when people talked, but also heard all sorts of strange sounds that she had never heard before. Dr. Bribosia had observed something similar in one of his patients a girl of 15 years, who, "really could not believe her own ears, when she heard sounds she had never before heard, but which to us sound quite natural. She thought she was a victim of hallucinations. By inspection of the numbers written down in reference to Miss P.'s case, one can readily see how the treatment was followed by regular progressive improvement from the beginning. The gain obtained after each seance was at first only 1 to 2 cm. and reached a limit that can be considered normal on the 14th of January. Before a cure had been reached, Miss P. had been obliged to suspend treatment for three days, and in consequence her hearing diminished two inches in each ear. This was a peremptory reason to continue the treatment a few days after the cure was considered complete. The little girl left us on the 24th of January. During the month following we had excellent reports of her, when suddenly she contracted a heavy cold and became as deaf as she had been before the cure. Experience told me that one seance like the former ones, would be sufficient to give her back what she lost, but I prescribed for the cold only inhalations and a gargle based on *Acidi Phenique*. Eight days after this treatment her cold as well as her deafness had disappeared.

On the 23rd of April I again saw Miss P. , her hearing was perfectly normal; but was the cure permanent? Would deafness not return after a severe cold through which the respiratory organs would be affected? I felt sure that the cure was complete, and this proved to be the case, since during the month of May she was quite ill, accompanied with high fever; this latter disappeared after a single air bath, and antiseptic treatment for three days completed the cure.

The facts can be summoned up as follows: Under the influence of a few air-baths, the sense of hearing has been rapidly established in a person who had given up all hopes of ever being able to hear. All buzzing in the ears had disappeared, the nasal canals being unob-

structed, the heavy breathing by mouth is no longer necessary. The exaggerated susceptibility to inflammation of the mucous membrane is done away with. I imagined that by massage I had given to the tympani their elasticity, but Mrs. P. thought otherwise. "No," said she, "the drums were not attacked, the massage of the drums had nothing to do with the cure. You must find another reason for it." I later found she was right. The little girl in question who is now over thirteen years old enjoys very good health though she still is subject to an attack of sore throat every two weeks, and this tendency has existed since her earliest infancy, and was the cause of her deafness. Many specialists were consulted but only the treatment of one of them, Mr. Bager, of Brussels, proved of value. He removed by operation the obstruction in the nasal passage thus making breathing easier. This was followed by catheterization of the eustachian tubes, the results were admirable, but Dr. Bager admitted that a complete cure was impossible without resorting to more energetic measures. After a year of continuous care the patient left Dr. Bager to go abroad. Catheterization was practiced by an awkward hand, disastrous results followed, she became worse; she came to me and was cured.

The natural sequence of catarrh is obstruction of the Eustachian tube. Dalby tells us this is quite a common occurrence in people of all ages, but principally in children. Prof. Moure considers it as a frequent complication following syphilis of the nose, or of polypus, etc., etc.

Politzer, Bergold, and more recently Loewenberg, have made the following statements: "The membrane tympani sometimes retracts *ad maximum*; this is a constant phenomenon in catarrh of the ear and we conclude that deafness is an indirect consequence of the obstruction of the eustachian tube. The treatment directed against this obstruction as practiced to-day seeks to reestablish free passage and at the same time to relieve the congested mucous membrane."

The air-bath alone can produce these desired results, its action can be compared to a soft, continuous, progressve, powerful, *air catheterism*, which penetrates the cavity of the ear, and does away with any foreign body. The compressed air bath has a powerful effect on the capillaries of the mucous membrane, it acts as a tonic, and Paul Bert remarks that the augmentation of the *barometrique* pressure increases the tension of the oxygen in the blood.

In 1820 Dr. Hamel, physician to the Court of Russia, wrote, that the diving bell could serve as a remedy in the case of deafness produced by the obstruction of the eustachian tube. Dr. Colladon, 1826, in his remarks on compressed air, states, that a diver never becomes deaf, but on the contrary it seems that in certain cases the action of the diving bell might serve as a remedy for deafness. Since 1836 when Tabarie introduced the compressed air bath as a treatment for deafness, thousands have obtained cures by it. It has been chiefly used in treating phthisis, bronchitis, anæmia, and diabetes. It is generally admitted at the present time that compressed air-baths administered prudently and systematically can do no harm in any case. The fever which follows is not a bad indication. Prof. Germain Seé of the Paris Académié de Medecine says he has known the temperature to be 37° C., in the morning and 37.5° C. in the afternoon, but generally becoming normal after a short time.

Prof. Lazarus of the Society of Medicine in Berlin, remarked that the care exercised at present in the administration of compressed air baths makes it permissible to use them in cardiac affections. *La Sclirose Arterielle* even in advanced degrees does not contraindicate its use. The action of these baths has been compared to that of digitalis.

M. Mœller states that the question of treating heart disease with the aid of the compressed air bell, has not yet been solved, but that it has been demonstrated that during the time the patient receives the treatment, there is a marked change in the blood pressure, decreased arterial and increased venous, the respiratory movements are diminished and the respiratory murmur is prolonged; this seems to indicate some difficulty in the pulmonary circulation; in the case of extreme weakness this treatment could but hasten the end.

On the other hand others say that in *every* case compressed air baths can only be beneficial, and as they invariably augment the appetite, an increase in vitality could not fail.

Conclusions: 1.—Catarrhal affections of the digestive or respiratory organs often result in an inflammation of the pharyngeal orifice of the eustachian tube causing deafness; the symptoms are often misleading, and may produce the supposition that the origin of the defect is in the internal or external ear.

2. The obstruction of the eustachian tube may be benefited or cured by compressed air baths.

3. The compressed air bath is the most efficacious massage treatment for the tympanum.

4. A cure by air baths will prevent the return of intermittent attacks, due to coryza, anginæ, laryngitis, bronchitis, catarrh of the drums, otorrhœa, etc.

When the patient is quite young a complete cure can be obtained by air baths, even in the most desperate cases; in adults they will produce the same results as long as the acoustic nerves are not completely degenerated.

6. This treatment for deafness differs entirely from that applied to other affections.

7. Cardiac affections as well as a state of low vitality, which have been considered contra-indications, will on the contrary be markedly benefited by a systematic prudent administration of compressed air baths.

A CASE OF EXTENSIVE HEMATOCELE RESULTING FROM TUBAL PREGNANCY RUPTURING INTO THE BROAD LIGAMENT.

By W. D. HAGGARD, M. D.,
NASHVILLE, TENN.

Miss K. C., house-girl, age 24, jumped from an express wagon, July 4th. Her menses were past due. Shortly afterward she was seized with pain in lower abdominal region, which grew worse during the night. Next morning a slight flow from the vagina was apparent which she regarded as a return of her menses. For several days the discharge increased and the pain gradually grew worse. One week after the accident the family physician was called. He proposed vaginal examination but was refused. Opium and ergot administered without effect.

One week later another physician was called, who likewise asked for a vaginal examination, but without avail. At the expiration of the third week, there was no improvement and the patient was taken to the Catholic Hospital. Dr. Coyle, the physician-in-charge, found an ovoidal tumor as large as a cocoanut above the symphysis pubis. It was very tender, non-fluctuating, and occupying almost a central position. As a vaginal examination was denied, he supposed the tumefaction to be a gravid uterus. The patient became dissatisfied at the hospital and returned home. On the 29th day I was called to see her, to meet Dr. Coyle in consultation, to whom I am indebted for the foregoing history.

THE EXAMINATION: Patient was found anxious, restless and impatient, suffering greatly from pain in lower abdominal and pelvic region. Temperature, 103°; pulse, 120; skin, hot and dry; tongue, heavily coated; intense headache; globular tumor above pelvic brim, so tender as not to permit of palpation. Bowels, tympanitic and tender throughout. Vaginal examination revealed left lateral pelvic space completely occupied by a non-fluctuating tumor, so exquisitely tender as to preclude a thorough examination.

The tumor in the hypogastric region was supposed to be an extension of the enlargement. The womb was closely hugging the symphysis, the external os, patulous and on a level with the arch of the pubes.

Her condition was most critical, her position as a house-girl anything but consoling. The possible rupture of the escapsulating peritoneal membrane with escape of contents into the general peritoneal cavity and the inevitable peritonitis was feared. Vaginal puncture and drainage were discussed and discarded. Section was urged as the only hope. Dr. Duncan Eve, who was added to the consultation, concurred. The patient, after a day's hesitation, consented to operation and was removed to St. Margaret's Hospital.

THE OPERATION: Twelve M., Sunday, August 7th, 1892. Took ether badly. Median incision. Anterior wall of tumor was adherent to parietal peritoneum, hence, they were incised together. The operation was practically extra-peritoneal. About three pints of dark, clotted blood turned out. Care was taken

not to break down the partition wall which so effectually walled off the hematic tumor from the abdominal viscera. The sac was quickly and thoroughly irrigated, sponged dry and the operation hurriedly completed. She rallied badly. The intense pain and restlessness which had been partially controlled by morphia for the last thirty-six hours became uncontrollable. She died at 12 P. M., twelve hours after operation.

POST-MORTEM. Two hours after death, under great disadvantages, incisions reopened, adhesions between sac and abdominal wall broken. The entire abdominal viscera of deep modena color, matted together in places from peritoneal inflammation. No blood found in abdominal cavity. Pelvis carefully examined, viscera fused together in a conglomerate mass. Uterus sought for and found enlarged, tubes not recognizable. The pelvic viscera removed *en masse*. The rectum adherent and perfectly black. Uterus measured antero-posteriorly, 1½ inches. Transversely, 2⅝; longitudinally, 5½ inches. After removal the mass was spread upon a plane surface and photographed, from which a drawing was made. The distended broad ligament, forming the sack, was greatly thickened.

MICROSCOPIST'S REPORT: "The specimen (endometrium) given me for examination was submitted to the usual procedures and found to consist of large embryonal cells completely filling the spaces of a myomatous reticulum. The cells were clearly the so-called 'decidual cells' having a round or oval shape and containing one or more nuclei; they varied in size, having a general average of about one-four-hundredths of an inch in diameter, or eight times the diameter of a red blood corpuscle.

"Remnants of utricular glands were present, but not numerous. Groups of connective tissue corpuscles were scattered here and there. The specimen showed clearly that decidual formation had taken place." HUGH R. MILLER.

Although the fœtus was not found, that it was a case of tubal pregnancy with rupture into the broad ligament is clearly established by the clinical history and post-mortem appearances, which may be summarized as follows:

1. She confessed having had intra-pelvic trouble previously (presumably gonorrhœa) for which she was treated locally.

2. At the time of the accident, caused by jumping from a wagon, her menses were past due. As to how long, her statements were misleading.

3. There was a fitful yet persistent bloody flow from the uterus during her entire illness.

4. Paroxysmal, colicky pains in lower abdominal and pelvic regions of frequent occurrence.

5. Existence of a tumor above the pubes, which she probably mistook for a gravid uterus.

6. Persistent refusal to submit to a digital examination, probably fearing the detection of her pregnant state.

POST-MORTEM APPEARANCES.

1. Enlarged and softened condition of the uterus with a patulous os showing escape of a sero-sanguinal, stringy fluid.

2. Enlargement of the left tube with a well-defined cavity from which the fruit sac escaped.

3. Existence of a deciduous membrane, as revealed by the microscope.

4. Discoloration of rectum, produced by blood dissecting around it, causing constriction and partial death.

Clinical Lectures.

OSTEOCLASIS.*

BY NICHOLAS GRATTAN, F. R. S. C., ED.

SENIOR SURGEON COUNTY AND CITY OF CORK HOSPITAL FOR WOMEN AND CHILDREN. GIVEN AT DR. LEWIS A. SAYRE'S OPENING CLINIC AT BELLEVUE HOSPITAL, NEW YORK CITY.

DR. SAYRE'S INTRODUCTION.

Gentlemen:—One year ago to-day I had the pleasure of introducing to you Sir William McCormac, of London, who gave a clinic on resection of the elbow joint, performing the operation upon an arm condemned to amputation. Now the patient writes the House Surgeon that he has a good, useful arm, though not perfect motion of the resected joint. To-day I am glad to have the pleasure of introducing to you Dr. Nicholas Grattan, a distinguished surgeon, of Cork, Ireland,

* Reported by B. F. Parrish, M. D.

[A resume of this lecture was given in the last issue. It is now given in full with a cut of the instrument.—ED.]

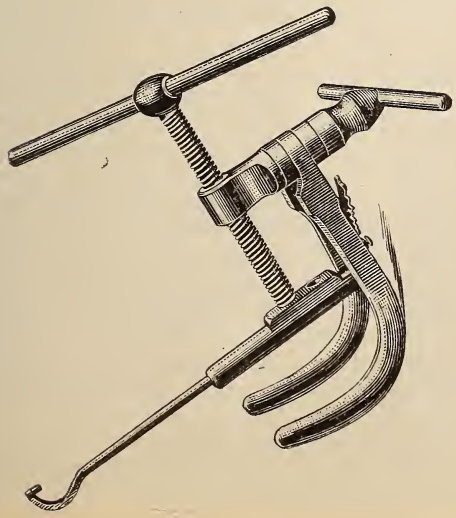
who will give you a lecture upon Osteoclasis.

Mr. Grattan said:

Gentlemen:—Dr. Sayre has honored me by permitting me to detail to you an account of my work with an osteoclast.

You are aware that, there are two methods of performing osteoclasis—1st, manual; 2nd, instrumental. It is the latter mode of procedure with which I will deal. The instrument which I use consists of two curved bars which can be approximated or separated as may be desired. These bars are connected together by means of a strong pivot, to one end of which is attached a cross-bar for the purpose of preventing the instrument overturning when in use.

Through the other end of the pivot the screw works, to the end of which is attached the handle. The other end of the screw is fitted into the pressure bar. The pressure bar is straight. The part through which pressure is applied to the limb is oval in shape in order to prevent its cutting the skin. A long rod is inserted into the end of the pressure bar to prevent its rotating on the limb when the screw is turned. The three bars are sufficiently long to prevent their *entering* and cutting the skin. The curved bars which oppose the pressure bar are cylindrical in shape. A rachet, each division of which corresponds to openings in the curved bars half an inch each, is placed underneath the pressure bars, the use of which is to prevent the curved bars from being forced together when the pressure is applied.



From time to time I have had the pressure bars covered with felt or india rubber, but I find that this is unnecessary and that the best results are obtained by having them highly polished. In my practice my endeavor has been to fracture the bones with the curved bars as near each other as possible. By so doing I obtain more accurate results. In my first case I had them at a distance of from 2 1-2 to 7 inches apart, varying with the age of the patient. Now I use them from 1 1-2 to 4 1-2 inches apart,—just half the distance of two years ago. I have had some slight skin wounds, and in cases of knock-knee I regard this of little importance. I prefer in such cases to make my fracture as close to the knee joint as possible. In cases of bow-legs I do not apply so great pressure and avoid, if possible, having skin wounds.

In operating on a femur for genu-valgum one curved bar of the osteoclast is placed on the outside of the femur just above the condyle, the other curved bar is placed from 1 1-2 to 4 1-2 inches higher up the limb according to the age of the patient. The oval bar, in which the end of the screw works, is applied to the femur on its inner side *transversely*, midway between the other bars. The three bars are held in position on the limb by an assistant, who must prevent the pressure bar from rotating by grasping the long bar, which is inserted into it. The assistant must also take care that the pressure bar does not compress the femoral vessel, and that *the skin* under the pressure bar is *quite loose*; otherwise it will be more apt to tear.

All being ready, the operator turns the screw quickly and forcibly, until the bone is felt or heard to break. The screw is then rapidly reversed to relieve pressure. After the bone has been broken and the osteoclast removed, the operator takes the limb in his hands, feels that all the fibres of the bone have been torn across, and sets the ends together in their new position. I usually employ a long splint, curved like a cask stave, to retain the limb in its new position.

I always *over-correct* my cases of *knock-knee*, and invariably use some method of extension in treating such cases, usually the weight and pulley. On the 9th or 10th day I examine my cases and if not sufficiently corrected readjust them into

any desired position. In some cases I have found it necessary to fracture the bone of the leg quite close to the knee joint in order to correct the deformity of knock-knee. Owing to the complicated anatomical arrangement of this part of the limb I regard this as a serious procedure and to be performed with the greatest caution.

Bow-legs are easily corrected by means of this instrument. In these cases the pressure bar is applied on the outside of the limb. In cases of anterior curvature of the tibia the pressure bar is also applied at the outer side of the tibia, and not on the front of the shin. In cases of osteoclasis of the lower extremity I lay down this rule: Always apply the pressure bar where you are least likely to do mischief. An anæsthetic is always to be administered during any operation, or any painful manipulation.

You are aware that in many cases the deformity of clubfoot is in part owing to defective fœtal unwinding of the lower extremity. In many of these cases the entire extremity is involved in the deformity. After correcting the foot I have several times fractured the tibia and fibula quite close to the ankle joint, and again in the middle third of the limb. I have by this means been able to correct the inversion of the foot which is so common in those cases, and the fracture close to the ankle joint has enabled me to get the foot more flat on the ground than I otherwise would have done. I have also crushed the tarsus and corrected many cases of flat foot with this instrument with the best results.

N. B.—During the hour Dr. Grattan operated upon four children. Three of them were children about three years of age. All of these had double genu-valgum. The fourth patient was a girl, 19 years old, with single knock-knee. All seven legs were easily broken just above the condyles of the femur. Some of them were put up with Buck's extension and the long side splint. The others were put up in plaster of Paris. In the case of the 19-year-old girl the skin was broken for a short distance by the pressure bar. The Doctor claimed that this is the only injury ever done when the operation is properly performed and that it was of no consequence.

During the lecture the Doctor passed around a knee joint which he had taken from a little girl 3½ years old. The child died ef tubercular meningitis 3½ months after he had performed osteoclasis upon both femurs for double knock-knee. The specimen was a very perfect and instructive one. It showed the bone perfectly healed without callous. There had been no injury to the softer tissues. The motion of the joint was perfect.

Since this lecture was delivered the cases operated upon have been observed in the wards of Bellevue Hospital. The patients have all made good recoveries with excellent results. The one patient with Buck's extension and Liston's long splint had a temperature of 101° with pain for several days. The legs were then redressed in plaster of Paris and elevated. After this the temperature fell and the patient had no more trouble. All the other patients were dressed in plaster of Paris and had their legs suspended from the first. None of these patients had the slightest trouble.

The accompanying cut shows Dr. Grattan's instrument as made by Mr. Robert Linder, of New York City.

Communications.

SULPHONAL.

CHARLES. M. BUCHANAN, M. D.
WASHINGTON, D. C.
PROF. CHEM. TOX., AND METALLURGY, NATIONAL UNIVERSITY.

Modern bibliography is particularly poor in information as to the special toxic properties of this new hypnotic and soporific. Here we are, most of us, sadly deficient in a knowledge of the toxicology of the drug. Such a condition of affairs behooves the profession at large to report in full any case throwing additional light upon the nature, action, properties and toxicity of not only sulphonal but of every new and untried aspirant for professional favor. It is only in such manner that we can hope to learn much of practical value concerning them—*per aspera ad astra.*

There have been published of late twenty-nine or thirty cases of poisoning attributed to sulphonal. It is stated that the chief symptoms were "dullness and stupidity of mind; prostration; more or less paralysis of body, and chills, vomiting

and diarrhœa. Death occurs from heart failure and œdema of the lungs." Here we have, as it were, a word picture of a person rendered moribund by sulphonal. One case, I remember, reported death from a half-ounce dose, that is, 240 grains. Another writer says "The harmlessness of sulphonal is not established by facts, although it may be by fancy." My experience with the *toxicity* of the drug is not sufficiently large to either affirm or deny, being limited to one case followed by recovery.

On the afternoon of the seventh day of May, was called in great haste to see Mrs. X., a most talented and accomplished person and a lady of great social prominence. Found her sitting up in bed, talking and fussing away at her nurse and trying to rise. She could not keep still; when she eluded the nurse, she paced up and down the room with unsteady gait muttering to herself all the while; while restrained in bed, she wrung her hands and cried, with thick speech, for "something to help her." This appeal seemed to be more mechanical than from any realization of her condition. Skin of darkish, bluish tinge, lips purple, pulse increased slightly in frequency but somewhat deficient in strength. Respiration only slightly embarrassed. Mental receptivity exceedingly impaired, bordering on almost total mental inhibition; physical excitation, causing movement of limbs and body. No prostration, paralysis, chills, diarrhœa or vomiting. Apparently there was a condition of weakness and depression of the cardiac apparatus, with almost complete loss of the mental faculties coupled with great muscular excitation.

On inquiry found that the patient was addicted to the use of liquor at times and also probably of morphine. Of late had been using sulphonal, buying it in bulk by the ounce. She had taken half the contents of an ounce box when the nurse, alarmed at the large doses which she took, hid the remaining half-ounce in a room adjoining. During the temporary absence of the nurse, she sought, found and took the half-ounce which had been secreted. Then ensued the condition above described.

This happened about three hours before I had been called, emetic draughts of hot water and mustard having been ineffectually administered in the meantime. Inasmuch as three hours had elapsed I deemed it useless to attempt emesis. Administered about an ounce of whiskey, and twenty grains each of chloral hydrate and ammonium bromide in tinctures of cinnamon and cardamon and elixir of orange. Left directions to repeat the dose in four hours if she did not sleep. I gave the whiskey for its stimulating effect and the chloral to calm the muscular excitation and produce physical rest. I preferred chloral to opiates on account of the condition of the patient's heart and her probable addiction to opium in some form.

She slept well, and awoke the next day practically in prime condition. Here is a "lady and the tiger" case—which cured, Nature or the medicine?

BOWEL OCCLUSION—AN EMERGENCY CASE.

By GEORGE R. DEAN, M. D.,
SPARTANBURG, S. C.

Surgeons are often puzzled over the diagnosis of acute abdominal troubles, and when suddenly called to a case where there is extreme urgency, and it is of the utmost importance that no mistake be made, this lack of knowledge is very keenly felt. All who have an experience in such cases can testify to the anxiety and worry they cause—and where a life is at stake the conscientious man will not be satisfied with guess-work.

Cases so often occur with symptoms that are not described in the books, that the surgeon must, in a great measure, depend upon his own surgical knowlege to unravel the thread of symptoms presented, and out of mystery to arrive at a correct diagnosis. It is easy to prescribe when the true pathological conditions are known. Cases involving the peritoneal cavity and viscera within, are often of such urgency and so marked, that a knowledge of the real trouble is hard to attain. Here, to be of service to our patients, we must decide our course of treatment early and fearlessly put it into operation, or we are doomed to see our efforts utterly ineffectual.

Having recently passed through an experience of this nature, and feeling how much experience, in such cases, would be of service to one suddenly confronted by a problem of this kind, in which a human life is involved, I have concluded to report

the following case: I was called eight miles from home on Friday, July 10, to see a young man, E. F., suffering with some intestinal trouble.

I found him in bed, with a good, full pulse, 102; temperature, 102.5°; respiration, 24; there was pain in the hypochondriac region, with some tenderness; the muscles of the abdomen were tense and hard; no pain except that now referred to the lower border of the liver and running back to the spine, but which, a short while before my arrival, extended down the right inguinal region. The countenance was dull and sodden; bowels had moved three times the day before, and once this morning—before I had arrived,—with frequent vomitings. These discharges I suspected were from the lower bowel, and not from the entire canal. I believed on my first visit, that I had some trouble to contend with that would involve the peritoneum, and not being willing to risk the story of the bowels moving freely, I gave calomel, gr. one-half, sodii bicarbonate, gr. ii; 4 doses at intervals of two hours, to be followed with a saline three hours after the last dose, and the use of the syringe to aid, if necessary, by enema. If these were ineffective I was to be notified early the next morning.

They did fail, and I was summoned urgently to his aid. I packed my bag for an emergency, and asking my partner, Dr. G. W. Heinitsh, to accompany me, started for his father's home. I found him in the following condition: Pulse, 120, wiry and hard; temperature, 101½°, respiration, 34; and his face the picture of distress and suffering; features, pinched; knees, drawn up to their fullest extent; head and shoulders, elevated; abdomen, much swollen and extremely tender to the touch, all over,—the tympany encroaching upon the diaphragm, so as to greatly interfere with respiration. He was extremely ill, and his anxious, pinched features pointed to a result, not far distant, if help was not immediate. I decided at once to open the abdomen over the appendix, thinking from the tenderness of that point, that I might here find the trouble. Though formerly, most of the pain had been referred to the lower border of ribs—latterly, he had referred much of it to this region. He was a brave boy, and after listening to my reasons for an operation he decided to take his chances with the knife. I told him death would speedily ensue without, and the chances were against him even with it. In this Dr. Heinitsh fully concurred.

Five years before, he had had measles and was quite sick. After this a pain had come in the right side where now it was located, and it had since followed him continually, causing him to walk and lean to the right side. While at work he had often to leave the field and go home and lie down, and for a day or two at a time would be unfit for his ordinary duties. He could not lie on the left side at all—a feeling of suffocation coming on immediately on turning on that side. The pain was described as a dull heavy aching, extending from the anterior border of the ribs of right side around to the spine. A little cold, over-eating, or constipation would aggravate it. He would get on to his knees when chopping wood in order to spare this side.

Preparations were made for an immediate operation. In the confusion incident to so serious a condition of a member of the family, everything was made ready with difficulty; fires kindled, water heated, while one pitcher with the handle broken was the only vessel in the house to bring water from the kettle to the basin. At length, everything being washed and scalded, ether was administered, whiskey, strych., and digitalis being first given. I made a three-inch incision in right umbilical region, one inch above the superior border of the ilium, and almost parallel with its descending portion, stopping just before reaching the external iliac which could easily be felt pulsating. Dr. H. was here invaluable to me, as he gave me assistance and watched the ether also, we having three neighbors to help in the way of holding basins, bringing water, giving ether, etc.

I quickly reached the abdominal cavity and found the very entrance blocked by old adhesions, everything hidden and effaced by one solid mass of adherent matter. Not one land-mark could be distinctly mapped out. I slowly detached the mass from the abdominal wall next to the ilium, thence upward toward the liver, thence toward the naval and finally into the pelvis. By great effort I brought a portion of what I thought to be the colon into view in the incision and saw as

ened, oozing surface. At this stage Dr. H. warned me that my patient was sinking, so without finishing all I desired to do, I hastily flushed the cavity with hot water from my one handleless pitcher and with stitches of silk twist closed the wound, dressed it with iodoform gauze and placed the patient in bed more dead than alive. He soon began to rally and in a few hours was restored from the shock. I left him believing he would die in twenty-four hours, thinking that I had not sufficiently broken up the adhesions to give relief. I left six ⅛ gr. calomel and soda powders, to be given in as many hours, and to be followed by saline and enemas. I also gave morphine and atropia hypodermically. I left him about 7 p. m.; at 11 p. m. bowels moved freely, also at 2 a. m. next day and again at 3, 5, 8, and 11 a. m. I saw him at this last hour. The abdomen was greatly distended; temperature 102.5°; pulse 120; volume better; respirations 30; countenance better; directed the use of calomel and salines to be continued during the following night. The patient could not relieve the bowels without rising to stool. This he had done without my knowledge, or consent; fortunately no bad results followed. I therefore introduced a rectal tube which obviated any further difficulties. His condition at this time was extremely precarious. There was great difficulty in breathing. He would frequently have to be raised to the upright position to prevent suffocation. I ordered 10 drops turpentine every four hours.

July 12th, third day, passed a restless night, temperature this morning 101½°; pulse 102; resp-20, abdomen softer; distension decreased; general condition improved; wanted food, surreptitiously took a chew of tobacco. I ordered three grains of quinine every four hours, the bowels to be kept open as before. Fourth day: Temp. 101°; pulse 96; resp. 22; all symptoms better; whiskey added to the treatment; bowels active. Fifth day: bowels ceased to move during the night; patient restless and anxious; temp. 102½°; pulse 110; resp. 26; his condition alarming. Calomel, soda and enema pushed as before. Sixth day: Temp. 99°; pulse 84; resp. 19. From this time on his condition steadily improved.

Conclusions: This case is a remarkable one, both as to its nature and results. His condition when I first saw him was, I had expected a florid, roughened, thick-apparently, not alarming. From the history as given after the operation when the family had quieted down and could go back over it composedly, I am of opinion that he had had repeated attacks of local peritonitis, and little by little, adhesions had been formed, until during this last, and most violent attack, it had advanced sufficiently to completely stop the passage of fæcal matter through the bowel. What the cause of this immediate attack was, I am not prepared to say. Possibly it was gall-stones, setting up peritonitis. The trouble has always been referred to the right hypochondriac region, and after the operation there was some distension at the point just over the gall-bladder. It was tender to the touch and he said that the pain there caused all the difficulty in his breathing. He could not lie upon the left side for a long time before the attack, and would often assume an erect position to keep from smothering. Since the operation, he can sleep in any position without pain. Had I been satisfied there had been *no* passage from upper bowel, at my first visit, I would not have waited until compelled to operate as a last resort.

This case teaches the real harm that may arise from the administration of cathartics where occlusion from any cause exists; this case was made worse by their use. These cases are usually neglected too long. Delay, until dangerous symptoms supervene—means, generally, death. I miraculously saved my patient, but under the same conditions and treatment, would probably lose as often as save.

Society Reports.

SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

Fifth Annual Meeting Held in Louisville, Kentucky, November 15, 16 and 17, 1892.

(From Special Correspondent of MEDICAL AND SURGICAL REPORTER.)

NOVEMBER 15TH—FIRST DAY.

MORNING SESSION.

The Association met in the Council Chamber of the City Hall, and was called to order at 9.30 A. M., by the President. Dr. J. McFadden Gaston, of Atlanta, Ga.

An Address of Welcome was delivered by Dr. L. S. McMurtry, of Louisville, Chairman of the Committee of Arrangements, the response to which was made by the President.

The first paper read was by Dr. Bedford Brown, of Alexandria, Va., entitled: Personal Recollections of the Late Dr. Benjamin W. Dudley, of Lexington, Kentucky, and His Surgical Work.

The speaker paid an eloquent tribute to Dr. Dudley and characterized him as the greatest living lithotomist that this country has ever produced, and the most successful in the history of the world. The speaker's close relationship to Dr. Dudley as a private pupil and assistant for two years enabled him to present a clear and faithful sketch of his character and surgical work.

Experiences in Pelvic Surgery was the title of a paper read by Dr. A. V. L. Brokaw, of St. Louis, Mo.

Of all the surgical problems difficult to solve, it may be truthfully said, that those met with in the pelvis are the most trying. The speaker knew of no surgical work which will compare with the experiences found in the pelvis; a diversity of conditions, complications and unexpected happenings are ever presenting. In a series of many operations but few will be alike in every particular. As his experience became larger he was free to confess his inability to correctly diagnose the character of abdominal and pelvic troubles. He had diagnosed pus tubes and found extra-uterine pregnancy; diagnosed extra-uterine pregnancy and found pus; diagnosed ovarian lesions and found the trouble located in the tubes and *vice versa.* When well-defined pelvic lesions exist, nothing short of radical measures succeed. The one condition above all others where exploratory incision should be adopted was in cases of suspected extra-uterine pregnancy. It was correct and good surgery to open the abdomen and not wait for all the classical signs to appear. The symptoms of extra-uterine pregnancy were so frequently obscure and unreliable that he was firmly convinced a radical position should be taken. A case was cited in point.

DISCUSSION.

Dr. William Warren Potter, of Buffalo, desired to endorse that portion of the paper pertaining to an early exploratory incision in cases of suspected extra-uterine pregnancy. As regards the use of the sound he had brought an indictment against it some six or eight years ago, consequently he would not expatiate upon it at this time.

Dr. Joseph Taber Johnson, of Washington, said that as soon as the surgeon diagnosed something in the abdominal cavity that ought not to be there, anatomically or physiologically, and was histologically wrong, it should be removed. An exploratory operation was justifiable in cases of suspected extra-uterine pregnancy, and the surgeon should base his further procedures upon what he finds after making the exploration.

Dr. W. E. B. Davis, of Birmingham, Alabama, thought the pendulum relative to surgical interference had swung a little too far. He believed that a great many so-called "tinkerers," who succeeded in relieving their patients, did not accomplish it so much by the local treatment they used as by having patients under their care, keeping the bowels open, giving constitutional treatment, seeing them regularly, etc. While, by so doing, they might not be cured in all cases, they were greatly benefited. Regarding the diagnosis, surgeons who were opening the abdomen constantly would rarely give a positive diagnosis in the case. Dr. Davis cited the case of a woman who had an acute attack of peritonitis, and the history was the same as from pelvic abscess.

Dr. Brokaw, in closing the discussion, said that in every case of suspected extra-uterine pregnancy it was good surgery to make an exploratory incision and operate before rupture took place.

Craniotomy Upon the Living Fœtus Not Justifiable, by Dr. Cornelius Kollock, of Cheraw, S. C.

This operation implied the death of the fœtus and a frightful mutilation of its body, often accompanied by serious lacerations of the vagina and adjacent tissues of the mother. Recent advances in obstetrics, gynecology and abdominal surgery contribute largely to a demonstration of the fact that a timely resort to Cæsarean section in pelvic obstruction is the great factor to success. In Germany, out of 149 cases of contracted pelvis, 109 mothers and 136 children were saved. If craniotomy had been done in those cases

149 children would have been destroyed and probably fifty women—perhaps more, making a sacrifice of least 199 lives. In many of these section cases exhaustion had supervened and septic influences had already been excited. This added to a tardy disposition to union by first intention, caused by contusion of the parts involved in the uterine incision, lessened materially the women's chances for recovery. Zweiffel was successful in 29 cases out of 30; Schauta did Cæsarean section fifteen times without a single death. Recently in eighteen operations done in Louisiana, fourteen were successful. Of eight in Ohio, six were successful. Dr. Joseph Price has done Cæsarean section a number of times successfully. Dr. Kollock is firmly convinced that 85 or 90 per cent. of the cases of obstruction of the pelvis forbidding the delivery of the fœtus in the natural way, might be saved by a timely resort to Cæsarean section.

DISCUSSION.

Dr. W. D. Haggard, of Nashville, emphasized the position taken by Dr. Kollock. He believes that when the profession fully realizes the immense difference in the number of lives saved by Cæsarean section over craniotomy, there will be no doubt as to its preference to the latter operation.

Dr. Hunter McGuire, of Richmond, favored Cæsarean section. Some time ago he saw the report of a case by Dr. Thomas, of New York, where, in doing Cæsarean section, he proposed to take the uterus out of the cavity and then open it. He thought this added very much to the danger of the operation, necessitating a larger opening, exposing the cavity of the abdomen a long time to the atmosphere, etc. He does not favor this procedure.

Dr. L. S. McMurtry, of Louisville, said that a few years ago it would have been impossible for one to have presented the views that Dr. Kollock had without meeting with violent opposition. Cæsarean section was then regarded as an extremely heroic operation, and until recent years the mortality therefrom was very great; but since it has been carried to the present degree of perfection by Sænger and others it has strengthened the opinions of abdominal surgeons, who now consider it preferable to craniotomy. Within the last two months symphysiotomy ha been brought before the profession and practiced as an alternative in certain cases for Cæsarean section. What the future of the former operation is to be we are not prepared to say.

Dr. Arch Dixon, of Henderson, Kentucky, advised Cæsarean section in a case in which he was called in consultation, but the family physician insisted upon him doing craniotomy, which was done, and while every precaution was taken with regard to rendering aseptic the field of operation, the woman developed pelvic peritonitis and died within four days. He believed a Porro operation would have saved the life of the woman and perhaps that of the child.

A Case of Extensive Hematocele Resulting From Tubal Pregnancy Rupturing Into the Broad Ligament, by Dr. W. D. Haggard, of Nashville, Tennessee. (See page 881)

Fibroid Tumor of the Uterus; Pregnancy, Rupture About the Fourth Month; Operation. Reported by Dr. S. M. Hogan, of Union Springs, Alabama.

Specimen presented.—The woman, colored, was 28 years of age, and from the symptoms and history of the case, he was satisfied there was a rupture and the probabilities were that it occured about the fourth month of gestation. He was also of the opinion that the rupture did not immediately destroy the fœtus, but that it continued to grow in its abnormal position. The speaker felt sure that if he had operated on the case immediately after rupture, the patient's life would have been saved! In all cases of rupture he would advise Porro's operation to be done immediately; that in all cases, where the tumor is large or multiple, intramural or subperitoneal, with a sacciform dilatation of the posterior segment of the uterus, and the os above the pubic bone, or inaccessible, the same operation should be done. In all cases where the tumor is in front of the child, or blocking the passage it should be done, provided the pregnancy has advanced to the full time, or there should be a hemorrhage, or rupture of the membranes, indicating that an abortion or miscarriage is imminent.

AFTERNOON SESSION.

A New Operation for the Radical Cure of Inguinal Hernia, by Dr. Geo. A. Baxter, of Chattanooga, Tenn.

Dr. Baxter presented an operation radically different in principle from any yet given. It consists in a prolongation of the incision, after the ordinary management of the sac and after ligation, through the internal ring into a more or less extensive laparotomy as the exigencies of the case demand; lifting the neck of the sac into the abdominal opening above the ring and its fixation there by deep suturing, cutting off the sac close above the peritoneum and closing it by buried sutures; and a final closure of the abdominal opening by buried sutures and a more superficial set of sutures which pass across *above* the closed sac and peritoneum and *underneath* the deep fasciæ, and which are intended to approximate the homologous tissues of the abdominal wall. The ring is closed with crucial sutures dipping over cord and traversing the tissues, and the seminal canal closed with deep suturing alone.

Points of originality claimed: A line of incision suitable for any inguinal hernia; by the fixation of the sac above the peritoneum a deflection of all abdominal expulsive force from the ring and canal; the thickened lining of the internal ring; and the method of closure of abdominal incision. Advantages claimed: Quick cure with avoidance of necessity of truss; deflection of expulsive force from internal opening and canal to abdominal parietes; ability to approach constriction either from without or within; avoidance of necessity for traction on sac or contents; ample room for treatment in diseased conditions of sac or contents including gut operation if necessary.

The Cure of Inguinal Hernia in the Male, by Dr. Henry O. Marcy, of Boston.

Until recently the cure of inguinal hernia in the male had been considered as at the best accidental, and when apparently effected, was generally of doubtful permanence, and the hernia was liable to return. The great majority of surgeons look upon on attempt at cure as ill-advised and believe operative measures should not be undertaken except in cases of strangulation. Dr. Marcy thought there was abundant reason for such conclusion, when judged from the earlier history of surgical procedures as attempted for cure. The essential surgical considerations for the cure of hernia were as follows: *First*, strict aseptic conditions. These pertain alike to all modern surgical procedures. *Second*, a free dissection. This is necessary in order to lay bare the internal ring, to permit of the enucleation of the peritoneal sac, and the separation and elevation of the cord out of the wound. The external epigastric artery often courses in the line of the incision. It is not seldom that the size of this vessel is such that the operator fears he has wounded the larger vessel. *Third*, the disposition of the sac. The separation of the sac to its very base before removal is to be recommended as the rule. There are times, however, when it is not easy to free the peritoneal pouch, owing to adhesions to the surrounding tissues, and in large old irreducible hernia a more or less intimate fusion of the contents to the inner wall of the sac. It is generally better to open the sac before ligating or sewing through its neck, since by so doing the condition at the internal ring is assured and by such knowledge the operator is often profited even if the sac is completely empty, not seldom the omentum is adherent at the internal ring, and even a constricted loop of intestine may escape observation when it is attempted to return the sac unopened.

Dr. Marcy closed his paper by saying that between three and four millions of people living in the United States were subject to hernia; and, if the demonstration is complete that the risk of life is less than one per cent. from the operative procedures instituted for cure, and that scarcely more than ten per cent. are subject to relapses, and these almost invariably in a state improved by the operation, the plea is a very strong one, to consider favorably the advisability of operation in a very large majority of all the sufferers from hernia.

The Treatment of Umbilical and Ventral Hernia, by Dr. W. H. Wathen, of Louisville, Ky.

He said the importance of studying carefully the best methods of treating hernia is now especially emphasized because of the increased frequency of the disease following laparotomy, and especially because the modern methods of surgery make the operation far less dangerous than it formerly was. The operation for radical cure of hernia in the prac-

tice of the best surgeons, except in extreme cases, is practically devoid of danger, and the result may be made permanent. Modern antiseptic and aseptic precautions have practically excluded the danger which formerly arose from infective peritonitis. The author said there are many cases of ventral hernia that could have been prevented had the proper treatment been carried out in the closure of the abdominal wound. In order that there may be no hernia following laparotomy it is necessary to get perfect union by adhesion of all the layers of tissue forming the abdominal wall—the peritoneum, muscular, the deep and superficial fascia, and the skin, but especially must we get union of the layers of fascia, for unless this be done the other layers will gradually separate and hernia will follow. This cannot be unless we succeed in bringing the cut edges of the fascia in even and perfect apposition long enough for strong union to occur.

NOVEMBER 16—SECOND DAY.

MORNING SESSION.

DR. W. O. ROBERTS, of Louisville, read a paper on THE TREATMENT OF UNUNITED FRACTURES BY RESECTION. He said the treatment of ununited fractures by resection was more than a hundred years old, White of Manchester having done the first operation in 1760. In consequence of the great mortality attending the operation it was abandoned until revived by Sir Benjamin Brodie. In 1805 Horeau, after having divided the fragments obliquely, fastened them together by tying a metallic wire around them. Rogers, of New York, in 1838 passed the wire through holes drilled in the wall of the fragment and then twisted it. Since then other surgeons have used sutures of various materials in the same way; some of them leaving the sutures in permanently, while others removed them after union of the fragment had occurred. Some instead of drilling the bone passed the sutures simply through the periosteum. Screws, nails, ivory pegs and clamps have been used for the same purpose. In the long bones, where coaptation of the fragments can be secured, Dr. Roberts feels satisfied that resection and a fixed dressing will be followed by just as good results as when sutures or other contrivances for fastening the ends of the fragments together are used.

SYMPTOMS OF FRACTURE, THEIR IMPORTANCE AND SIGNIFICANCE. Dr. W. C. Dugan, of Louisville.

(To appear later.)

DISCUSSION.

DR. BEDFORD BROWN, of Alexandria, Va., related the case of a boy who sustained a compound comminuted fracture of the skull in 1860, yet he was perfectly conscious and had no symptoms of compression of the brain. The spiculæ of bone were removed, and recovery followed.

DR. J. H. LETCHER, of Henderson, Ky., advised against the too hasty resort to the use of trephine and chisel in injuries of the skull.

DR. C. KOLLOCK, of Cheraw, S. C., had trephined in two cases with successful results.

DR. J. H. MCINTYRE, of St. Louis, reported a case of traumatic insanity in a railroad employe in which he trephined with success. The fracture was an extensive one and occurred in the upper Rolandic region. He reported several other interesting cases.

DR. WILLIAM WARREN POTTER, of Buffalo, called attention to fracture of the internal table of the skull without fracture of the external; hence the great liability to error in diagnosis.

DR. HOWARD A. KELLY, of Baltimore, related the case of a man who fell and was brought to the Presbyterian Hospital in a comatose state. Careful examination revealed the fact that the man had diabetic cataract with fracture at the base of the skull.

DR. WILLIAM T. BRIGGS, of Nashville, had trephined in fifty cases of epilepsy. Four-fifths of the cases operated on were relieved temporarily but not permanently.

DR. T. A. REAMY, of Cincinnati, mentioned the case of a man who had fallen from the second story of a court house, sustaining a fracture of the skull, but had never had epilepsy or any bad symptom following the injury. He thought this case would be some comfort to the country practitioner who did not enlarge the scalp wound in all cases.

The papers were further discussed by Drs. Vance, Lydston, Nicolson, Greenly, and Baxter, all of them favoring radical measures in the treatment of injuries of the skull.

Dr. L. S. McMurtry, of Louisville, read a paper entitled Ovarian Cystoma with Twisted Pedicle and Peritonitis; Ovariotomy in Second Week of Typhoid Fever—Recovery.

(To appear later.)

Intestinal Anastomosis by a New Device. By Dr. H. Horace Grant, of Louisville, Ky.

For more than a year the speaker had been endeavoring to perfect some instrument to simplify direct suture, but it had been so difficult to get just what he wanted that time had not been allowed since the completion of the instrument to test it fully. It is to be used only after resections. The two blades of the clamp are oval scissors one-fourth of an inch in transverse and two and a half inches in longitudinal diameter. The arms of the clamp are made long enough to allow introduction of full five inches. After the gut is exposed, a strand of iodoform gauze is passed through the mesentery and constricts the intestine fully six inches from each point of intended resection. The mesentery is tied off over the portion to be resected with fine silk, in two-inch loops, cut close and dropped in the usual way. When the resected portion is removed the gut ends may be washed out if desired. While the two ends of the divided intestine are held parallel, one blade is entered in each, allowing at least one and one-half inches of gut beyond the proposed anastomotic opening to permit of invagination of the ends. The clamp is tightened and the two surfaces thus firmly held are rapidly stitched together by a continuous overhand Lembert suture of fine silk. Two rows of parallel sutures as suggested by Abbe may be used if desired, though it had seemed that one is enough according to the author's experiments. The work can be done far more rapidly and accurately than without the clamp. When the suturing is finished the clamp is tightened if need be, and a long bladed dressing forceps passed in the bowel and the oval plug removed or pushed in. The scissors action of the blades, together with the ten or fifteen minutes pressure prevents any hæmorrhage. The clamp is now withdrawn and the ends invaginated in the usual way.

DISCUSSION.

Dr. A. V. L. Brokaw, of St. Louis, thought the instrument exhibited by Dr. Grant a good one, and said that anything which materially assists the surgeon in making intestinal anastomotic operations rapidly was of great value; that time was a most important element. The use of rings, plates and mats in the past were bad. He believes that we can suture far more rapidly with Dr. Grant's instrument than with any other device he had thus far seen.

Dr. W. E. B. Davis, of Birmingham, Ala., believed a large number of operators had abolished mechanical devices in doing intestinal anastomosis. His brother (Dr. John D. S. Davis) had devised a rubber plate and mat, but now prefers not to use the plate. In the case of resection of the bowel he thought the device of Dr. Grant was an ingenious one, inasmuch as it would facilitate the work of the surgeon and enable him to do an operation very quickly. He had conducted a series of experiments in an effort to do away with mechanical devices, by which the surgeon might use the end to end operation by splitting up the bowel. While the operation was successful in some cases, the strain on the circulation was too great, and he now condemns the operation.

Dr. G. Frank Lydston, of Chicago, directed attention Dr. J. B. Murphy's anastomosis button, a recent device, by which he says cholecysto-enterostomies can be done in from eight to ten minutes.

AFTERNOON SESSION.

The Association was called to order at 2.30 P. M., with the First Vice-President, Dr. C. Kollock, in the chair.

The President delivered his Annual Address. He took for his subject, "Compatibility of Conservative and Aggressive Surgery."

The circumspect philosophy of former days taught us what man has done, man may do. But the developments of more recent times say whatever is practicable may be undertaken; without regard to precedents,—conservative and aggressive processes are combined in progressive surgery. Conservatism in the use of all the appliances of surgery is not inconsistent with the application of the most energetic means of relief in structural disorders. A misapprehension exists with many of our profession as to the true sphere of progressive surgery,

and it was the purpose of President Gaston on this occasion to make a distinction between rashness in the employment of operative measures and boldness in the use of surgical means of relief when clearly indicated. Real advances in surgical practice have not been the result of cutting and slashing without due consideration, but have accompanied the painstaking investigation of the conditions requiring the knife, and caution in the performance of operations. As a preliminary to any surgical procedure of a radical nature, correct diagnosis is essential, but to accomplish a proper understanding of a deep-seated disorder it is often requisite to make an exploratory operation of greater or less magnitude. The information based upon such an exploratory measure serves as a guide to any further surgical procedure. Dr. Gaston said that ignorance and inexperience often lead to sad results in meddlesome surgery, when limbs are sacrificed or organs mutilated, to gratify the desire to figure as a bold operator on the part of a would-be surgeon. In such cases no honorable member of the profession should shield the culprit from the charge of malpractice or from the assessment of damages by a court of justice.

A Plea for More Rapid Surgical Work, by Dr. Ap. Morgan Vance, of Louisville, Kentucky.

A great number of surgeons pay little attention to the time consumed in an operation, or to the nicety of manipulation and dexterous use of instruments that our forefathers prided themselves upon. He had seen on numerous occasions the work of our most distinguished surgeons, and had seen deaths occur from prolonged anæsthesia and too much time consumed in operation, which would not have taken place if much time had not been wasted unnecessarily. The habit of starting the anæsthetic before all preparations were completed was very reprehensible.

The paper was discussed by Drs. Arch Dixon, Rufus B. Hall, Geo. A. Baxter and Edwin Ricketts, all endorsing the position taken by the essayist.

Surgery of the Ureters with a Report of Cases, by Dr. Charles A. L. Reed, of Cincinnati, Ohio.

Surgery of the ureter is one of the developmental subjects of abdominal surgery. These out-of-the way conduits, exercising functions that are vital in character, were liable to diseased conditions which baffle the resources of the diagnostician and tax the ingenuity of the operator. For purposes of diagnosis the physical means at our disposal may be briefly summarized as follows: (1) Exploration of the lower end of the ureter by digital examination, (a) through the vagina, (b) the rectum, and (c) the bladder; (2) Exploration of the lower end of the ureters by the sound passed through the urethra and bladder into the ureters; (3) Exploration of the central portion of the ureters by abdominal lumbar palpation—an expedient of practical value only in cases of extreme urethral distension occurring in very thin subjects; (4) Exploration of the upper end of the ureters by exploratory nephrotomy. Each of these several expedients might be amplified, but it would be uncalled for here. Dr. Reed said that since catheterization of the ureters has been popularized in this country, and since the technique of the procedure has become understood by those who have studied it, the diagnosis of disease within and surrounding these tubes is vastly more common. The digital exploration through the urethra and bladder is an easy expedient so far as the surgeon is concerned and often leads to the elucidation of important pathological facts, but the speaker is forced to believe that it is not without danger to the patient. He has been forced into this belief by one case of incontinence lasting for nearly a year, and by two cases of weakened power of retention, one of which is now of quite two years' standing. Dr. Reed said that abdominal section for diagnosis of ureteral conditions, notably in cases of suspected calculus, is entirely justifiable. He then reported a case of peri-ureteritis; stricture; kolpo-cysto-ureterotomy, with recovery. The second case was one of cicatricial stricture of an excised ureter; hydro-nephrosis; nephrectomy, remaining urethral disease.

Specialism in Medicine, Particularly as Related to Surgery and Gynecology, by Dr. William Warren Potter, of Buffalo, N. Y.

His argument summarized is:

1. There is essential need for specialists. Divisions of labor in every field are

demanded, and nowhere more than in medicine.

2. Specialists being a necessity, they must equip themselves by years of study, and devote themselves to a still greater number of years of general practice before they are justified in offering themselves as specialists.

3. They must conduct themselves in such a way as to merit the respect of the general practitioner, and to invite his co-operation in their work.

4. The unwritten ethics of specialism demand that there shall be reciprocal relationship maintained, not only among specialists themselves, but also between specialists and general practitioners.

5. The opportunities for perfection in special lines of medical study are so great, and medical literature both journalistic and text-book, is so rich, that an awful responsibility is entailed.

6. The schools ought to discourage any and all students who give promise of entering upon the practice of a specialty as soon as the college doors are passed, and before the swaddling clothes of the professional tyro are slipped.

The General Practitioner as a Gynecologist, by Dr. R. M. Cunningham, of Birmingham, Ala.

The general practitioner should not undertake work that can be better and more safely done by the specialist, provided one is obtainable. He should be willing to do and attempt the most radical and dangerous operations when necessary to save life, provided a specialist or one better prepared to do the work cannot be obtained. In cases not necessarily dangerous, or in which life does not become more or less a burden, but in which a cure can be effected only by radical procedure, but which may be materially benefited, or symptomatically relieved by milder methods, he should adopt the latter and not the former. In many cases the field is clearly his own, belongs to him, and he should be prepared and competent to treat them with safety and success.

Specialism in Medicine, by Dr. W. F. Westmoreland, of Atlanta, Ga.

There are two kinds of specialists, the one with his preconceived ideas, which become warped, who always suffers from astigmatism, etc.; the other, the man who has worked his way by his generally acknowledged ability in any particular line.

A Preliminary Report on the Morphology of Ovarian and Myomatous Tumors, by Dr. Howard A. Kelly, of Baltimore, Md.

The form of abdomen characteristic of large ovarian cysts is a globular or ovoid distension of a part or the whole of the abdominal wall, pushing out the infra-umbilical portion much more than the supra-umbilical, at least so long as the tumor occupies the lower half or two-thirds of the abdomen. This enlargement is uniform in parovarian cysts and polycystic tumors; exhibiting but few bosses, due to the fact that the latter are composed of one or two large cysts associated with a mass of smaller ones, and the large cyst is best accommodated in the median line in the distended concave anterior abdominal wall, while the smaller ones at the side or back consequently do not show. Prominent exceptions to the general rule just enunciated that pelvic tumors distend most markedly the inferior abdominal zone are the notable stretching of the upper abdomen in very fat women with large ovarian tumors, and the like distension in rachitic dwarfs in advanced pregnancy. Nodular myomata on the other hand stand out in marked contrast to the smooth outlines of cystic tumors in giving to the lower abdomen a lumpy bossed appearance, thus exhibiting through muscles and skin a softened exaggeration of their irregular outlines. This peculiarity still remains prominent although softened, after these tumors have undergone fibro-cystic degeneration.

Cystic tumors filling the pelvis and part of the abdomen are but rarely found to originate in some upper abdominal organ. The speaker presented for demonstration a photograph of an enormous kidney, containing over a gallon of pus, extending from the pelvic floor up through the abdomen and pushing up the left ribs.

November 17—Third Day.

Morning Session.

Dr. A. M. Cartledge, of Louisville, read a paper entitled The Present Status of Drainage in Surgery. He presented the following summary:

1. The principle of artificial drainage

in surgery, while very ancient, was imperfectly understood, and was oftentimes as much a factor for evil as for good.

2. Though our knowledge of the principles which govern a healthy regeneration of wounded structures has greatly advanced, and our progress in wound therapeutics kept pace, we fail to appreciate how artificial drainage can be altogether dispensed with in surgical practice.

3. To lessen the use of artificial drainage it is necessary to thoroughly apply the principles of asepsis and antisepsis, combined with buried sutures, fixation, and alimentary or systemic drainage by purgation.

4. Where from any reason the production of a serum cannot be controlled, its removal by drainage is a safer surgical measure than any attempt at sterilization *in situ*.

5. The time required for primary drainage is from twenty-four to sixty hours; to wait longer is to encourage trouble, to remove sooner than twenty-four hours is taking risks not warranted in the premises.

6. Capillary is to be preferred to tubular drainage in wounds other than those of the large cavities. For this purpose absorbable material should be selected, catgut being the best.

7. Where it is desirable to combine hæmostasis and drainage in the same measure, the strips of iodoform gauze, as recommended by Mikulicz, fulfill a most useful purpose.

8. Where natural drainage can be utilized without producing unsightly cicatrices, artificial drainage should be dispensed with; when feasible combine the two.

9. Wounds involving the brain and cord had best be drained to avoid mechanical violence to the function of delicate structures by retained serum.

10. Necessity for artificial drainage will most often arise in wounds invading the large cavities; here inflexible tubular drains (glass) best meet the requirements, aided or not by materials acting by capillarity.

11. The method of secondary suture after primary wound secretion is over, advised by Kocher, seems to possess no advantage over drains that have to be removed, and certainly is not to be compared in convenience, comfort, etc., to the patient, to absorbable capillary drains.

The Treatment of Tubercular Peritonitis, by Dr. William H. Myers, of Fort Wayne, Ind.

When we have arrived at the conclusion that peritonitis is present, and have discovered the cause, the blow must be struck simultaneously with the onset. No delay can safely be tolerated, the only hope of rescue being the sudden arrest of the disease. By the time that the normal outlines of the abdomen are obscured by tympanitic distension, respiration quickened and shallow, the pulse rapid and wiry, the supreme moment for precise diagnosis is passed. Abdominal section for tubercular peritonitis was the most recent triumph of surgery. Dr. Myers had treated three cases of tubercular peritonitis by abdominal section, washing out the abdominal cavity and drainage, with complete recovery.

Bacteriological Research in its Relation to the Surgery of the Genito-urinary Organs, by Dr. G. Frank Lydston, of Chicago.

The author said that in his opinion modern bacteriological and pathological research has nowhere been more productive of scientific and practical progress than in the special field of genito-urinary surgery. He would not attempt to decide the question as to whether under certain circumstances the microbial organisms which are constantly to be found in the secretions of the genito-urinary tract, are causal factors in pathogenesis of various forms; or, on the other hand, to decide the precise relation of heterogenetic organisms to the same morbid processes. The relation between what may be termed the normal germ and germs of non-pathogenic properties must certainly be left to the practical microbiologist. We are warranted, however, in drawing certain inferences and making certain practical deductions from what we know of the evolutionary laws of progression, differentiation and adaptation to environment. Many of the diverse forms of disease of microbial origin were doubtless embraced under the omnibus term of urinary infection. The present state of our knowledge does not admit of arbitrary differentiation between them. It is sufficient to say that many forms of organic and functional change affecting the genito-urinary tract are of microbial origin. These processes range in severity from a general infection with

effusion and perhaps suppuration in joint cavities to so simple a local lesion as a chronic prostatic irritation. The author quoted the researches of such modern authors as Reginald Harrison, Halle, Rovsing, Krögius, Bumm, Albarran, and Cuyon.

Ovariotomy in Old Women, by Dr. Joseph Taber Johnson of Washington, D. C.

The author reported three cases, and felt quite sure that prolonged anæsthesia and manipulation within the peritoneal cavity would have proved fatal. The first patient was sixty-seven years of age, and the tumor removed weighed fifty-two pounds. The second case was one of multilocular ovarian tumor weighing sixty-four pounds. On October 10th, of this year, he removed an ovarian tumor weighing fifty-six pounds from a lady who was sixty-seven years old, but who looked to be 100. Improved methods, quicker operations, antiseptic technique and provisions against shock, show thirty-three cases between the ages of sixty-seven and eighty-two with only two deaths, against twenty-four cases, done twenty years ago, between the ages of sixty and sixty-seven with a record of six deaths. These figures demonstrate in addition to improved technique the surprising fact that old age is no contra-indication against ovariotomy.

The Simple, Septic, Traumatic and Specific forms of Cervicitis, and Their Treatment, by Dr. Bedford Brown, of Alexandria, Va.

Simple cervicitis arises alone from simple causes. It never originates from infection of any kind. It could exist for an indefinite period without affecting the surrounding structures. For many years the author in the treatment of this affection has addressed his remedies to the interior of the cervical canal alone, whether he used nitrate of silver, sulphate of copper, carbolic acid or iodine. Septic cervicitis arises always from septic infection and the pelvic structures are connected by lymphatic communication. Contact with the os of portions of putrescent placenta, membranes, coagula or septic discharges from diseased uteri were the common causes. Antiseptic measures alone could counteract septic infection and inflammation, whether in the form of septicæmic fever or local inflammatory action. All other agencies were simply palliative or adjuvant in character. Traumatic cervicitis was simply inflammation and congestion of the cervix from wounds inflicted on that body either during labor, abortion or the use of dilating instruments. The author treats this form of cervicitis by means of nitrate of silver, varying in strength to half a drachm to a fluid ounce of water applied in the canal and over the entire cervix. He finds that most of his cases of open and all cases of concealed wounds heal by this method. Specific cervicitis may arise from gonorrhœal or syphilitic infection. In the early stages he resorts to douches containing peroxide of hydrogen in the proportion of one part to three or four of boiled water, and also permanganate of potash, one grain to the ounce of water.

Shock, by Dr. James Evans, of Florence, S. C.

The speaker said in the severe injuries inflicted on the body by accident, and in the major operations of surgery, not the least element of danger to life is the condition known as shock which rapidly supervenes. The degree of shock is not determined solely by the extent and gravity of the physical injury. Certain idiosyncrasies of constitution, the character of the force which inflicted the injury, and the circumstances under which it occurred, are potent factors in its determination. Individuals of a highly wrought and exquisitely nervous organization bear pain with far less fortitude and are more susceptible to shock than those of dull and obtuse intellects and blunted sensibilities. The author reported a case in point. In laying the foundation of a bridge across the Pee Dee River in South Carolina, an immense block of granite weighing over a ton was being lowered into a pit forty-four feet in depth, at the bottom of which was a man who was to direct when it was in proper position. When this huge block of stone was suspended over the pit the cable holding it began to slip, and the man below was warned to crouch in a corner, as it would inevitably fall. The rock did fall, and the man in the pit miraculously escaped without injury, but he was taken out in a perfectly lifeless condition and was exceedingly ill for more than a week.

A Manipulative Mistake and its Consequences, by Dr. George Ross, of Richmond, Va.

The author related a case of a woman who had suffered from unremitting, agonizing tenesmus the result of a mass which she carried seven years in her bladder, and which proved to be on inspection a pledget of absorbent cotton once saturated with iodine, in shape a truncated cone, and thinly incrusted with phosphate of lime. The patient believed it was introduced by her first physician, who, when attempting to apply an intra-uterine dressing, mistook the urethra for the cervical canal.

Dr. William Perrin Nicolson, of Atlanta, Ga., made some remarks on Hare-lip Operations, in which he advocated the use of a simple suture instead of a pin, and also recommended paring the edges.

Cholecystotomy, with the Report of a Case, by Dr. Edwin Ricketts, of Cincinnati, O.

He had operated thirteen times for obstruction of the gall ducts. This patient, a lady, thirty-four years of age, married, consulted him last June. She had never suffered markedly from jaundice, nor from acute attacks of hepatic colic, no marked distension over the region of the gall-bladder; abdominal wall at least three inches in thickness; some general tenderness of the liver elicited by percussion. The patient had the characteristic putty-colored stools, and was losing flesh rapidly. The author advocated allowing a glass drainage tube to remain in until the common duct was opened, and then, if necessary, to make an anastomosis between the gall-bladder and the duodenum.

The following officers were elected for the ensuing year;

President: Dr. Bedford Brown, of Alexandria, Va.

First Vice President: Dr. Jos. Price, of Philadelphia.

Second Vice President: Dr. George A. Baxter, of Chattanooga.

Secretary: Dr. W. E. B. Davis, of Birmingham, Ala.

Treasurer: Dr. Hardin P. Cochrane, of Birmingham.

Place of meeting, New Orleans, La. Time, second Tuesday in November, 1893. Chairman of Committee of Arrangements, Dr. Albert Miles.

TOO MANY PHYSICIANS—A REMEDY.

That there are too many men engaged in the practice of medicine is generally admitted. That there are none too many of those fully qualified for their work is also as generally accepted. We cannot wait for the public to be sufficiently educated to discriminate between competent and incompetent service. We must take the advanced ground and be the teachers ourselves. Not only the remedy, but also the hour in which the remedy itself should be applied is at hand. Instead of scores of medical schools opening wide their door and crying, Come, let them nearly close these entrances and hedge up the way by a careful and discriminating examination. Let the weeding begin now, and let it keep up at regular intervals throughout the college course. First, there should be an improvement in the quality of the instruction imparted; second, the standard for admission should be raised; and third, the requirements for graduation should be far greater than at present. No school need fear for lack of patronage if it takes this advanced ground. The profession will rally to its support. Instances could be given where this has proved to be the case to a most flattering degree. Begin now to lessen the annual output of doctors, and unfair and often disgracefnl means of competition will cease. Commercial methods of obtaining a business will be no more and we will be in word and deed a noble profession.—*National Med. Review.*

ABORTIVE TREATMENT OF BUBOES BY WELANDER'S METHOD

This consists in injecting into the center of the bubo, by means of a hypodermic syringe, a one per cent. solution of benzoate of mercury, and then applying compression by a bandage. This must be done before suppuration occurs. A single injection in most cases is sufficient. Of the cases ninety-one per cent. and eighty-seven per cent., respectively, have been cured by the author and by Lebrick, of Odessa.—*La Revue Medicale.*

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THE MEDICAL AND SURGICAL REPORTER.

SATURDAY, DECEMBER, 3RD, 1892.

DIPHTHERIA AND ITS RELATIONS. A TRULY ORIGINAL RESEARCH.

Health reports from different sections of this country and abroad show that diphtheria is unusually prevalent. For many years science has been devoting some of its best efforts to discover the nature of this disease, but it has been only groping in the dark. Clinicians have studied at the bedside and have treated it empirically because they were ignorant as to its nature. Investigators have devoted fruitless hours tracing into its ultimate analysis this mystery. Bacteriologists have discovered, rediscovered and disputed among themselves as to the organism responsible for all the mischief.

But when we are ready to despair, the discovery is made suddenly, and we are surprised to find how simple the explanation is.

Diphtheria is no longer a puzzle. It has been reserved for a contributor to the *Medical Record* to enlighten the profession and promise to practically annihiliate this "terror by night, this pestilence that walketh at noon-day." After a suitable introduction this investigator proceeds as follows:

To give myself a clear perspective, hence, I have determined to grasp the whole human being at the given moment—that is, to take everything into the scope of my investigation that might be a carrier of the cause of disease, as, for instance, the saliva, urine, the excrements, the vomita. the blood, and the membranes, of course all taken ante-mortem. I began under the mistaken idea that these researches could be concluded in four to five weeks, and that then I would be able to give myself and my interested friends a lucid explanation on their results. However, after I had once started on the inductive way and attempted to solve and answer the questions that suggested themselves, I saw before me a task which, for complication in respect to etiology, physiology, pathology, chemistry, and natural philosophy, left nothing to be desired. I stood before a seemingly endless problem. Periods of stagnation [cerebral?] occurred, but the more difficult the problem became the more energetically did I set my will to tear away the thick veil that nature in its mystery threw over it. My motto was: "I want to find the truth for the sake of the truth, even at the cost of my life."

There passed—shall I tell—five long weary years before I saw light, truth, and terra firma united before me. But this light shows me that I have placed myself in the most direct contradiction of to-day concerning microbes and bacteria as causes of disease. This contradiction I have not labored to find, neither did I desire it. It is here: it cannot be cast out from the world. We must calculate with this new factor, not in my interest, but in that of all humanity. I do not deny the existence of microbes or bacteria, but I do deny their causa primaria in the introduction of the disease. In twenty-five cases which I have systematically investigated I found microbes, bacilli, cocci, mycelia, thallophyta, spores, trichomata, palmelaceæ in various forms, but with these a heretofore unknown plus, which must not be omitted in this calculation. This unknown plus is composed of spirals, ova, granules, episperm. These factors form a constant basis in the disease, and hence they must be the real, and fundamental cause of diphtheria, while the hitherto supposed true causes are shown to be secondary phenomena.

On the results of my investigations I have constructed twelve theses. * * * The work is independent, unconstrained, uninfluenced by the current idea of the day. Here speaks Nature in her might, pure and unadulerated. The language of Nature is always truth, and this I wished only to interpret for my contemporaries and posterity in my work. I wished to present diphtheria, this dreadful destroyer of children, in persona ipsa, to the anxious mothers and to the profession.

THE THESES.—I. Diphtheria is caused by a living organism. This may be either winged or unfledged—infectio originalis.

II. The constituents of true diphtheria consist in spirals, ova, granules, episperm.

III. Tho granule is an albuminoid body and a toxicon katexochen. It is a trivalent, albuminoid animal ferment.

IV. The episperm is not a bacterium. It is the intrinsic, living attribute for the to-be-fructified ova. Its destination requires an exceedingly high degree of activity.

V. The so-called membrane is positively only a local manifestation of an eliminative and exudative process, caused by the previous absorption of granules into the blood and lymphatic circulation through the intestinal glands.

VI. The so-called membranes, whether creamy, chamois-like, hyaline, or parchment-like, are chemically and physiologically identical with the factors originally deposited in the intestines and partially their products of separation.

VII. The coexistence of microbes, bacilli, spores, schyzomyceta, mycelia, thallophyta, trichomata, palmelaceæ, and also other cryptogams and microbioses is not to be denied. They increase the intensity of the disease as well as the danger to life, but they are not the cause, neither the causa physica nor the causa excitans.

VIII. On the same basis of reasoning, there is a human and an animal diphtheria.

IX. The central and peripheral phenomena are dependent on the position of the constituents, but particularly on the condition, the quantity, and the translocation of the absorbed granules.

X. Diphtheria is an embryonal, intestinal parasitism, with consecutive local manifestations in the pharynx and larynx, with a decidedly cystic course, and of sometimes apparent hibernating tendency.

XI. The infectio originalis may occur directly or indirectly.

XII. An infectio secundaria is possible by means of the granule and episperm. It has, however, a decided moderation and deviation in its course.

These theses it is my intention to defend in my work against the representatives of bacteriology. For greater lucidity, I give below a short *resume* of my work on the nature of diphtheria. The causa physica, the punctum saliens of diphtheria is the generative propagation, or the succession of generation of a certain living organism. I am now in possession of this organism, of the spirals, ova, granules, episperm, membranes, etc. The *facit* of the entire inductive work leads to the conclusion that there are metamorphemena which select man, certain mammalia, and also birds as their host, to carry out the alimentation and transformation of their embryonal posterity in this adopted economy, although incidentally and and transitorily, yet also compulsorily.

The organism reaches the human economy by means of uncooked food, perhaps also in water in the form of a small insignificant larva, and here begins the progeneration in the production of ova.

After drawing a pathetic scene of the mother parasite sacrificing herself for her few thousand children—this mother, in anticipation of imminent death, carefully screwing by means of the spirals, the helpless young to the walls around them, dictating to the unwilling host the exact character of the food for each infant and providing for her children thousands of "episperm rods for fructification," and finally expiring of exhaustion—the author goes on.

The character of the disease, namely, whether there develops in a given case, diphtheria, scarlatinal diphtheria, or croup, is dependent on the disposition of the constituent elements, which form the natural modus propagandi. If, then, we wish to accurately specify the cause of diphtheria as such, we must say:

1. The propagation of the metamorphemena is the causa physica. 2. The mother, as the state of life, is the causa propria. 3. The spiral, as the chain between the intestine and the ova, is the causa mathematica. 4. The ova deriving fermented nourishment, the causa postulans. 5. The granule, as the general ferment, the causa excitans. 6. The episperm rods, as the fructifying element of the ova, the causa alterans. 7. The fruits of the creeper plants, as bearer of the germ, the causa medicatrix. 8. The sojourn of the being in the free nature, the causa remota.

The causa physica is chronologically in diphtheria as follows: 1. The albuminoid ferment, in breaking up the plasma, is the causa primaria. 2. The microbis, capable of multiplication only in an altered economy, is the causa secondaria. 3. All the microbioses, as bacilli, cocci, spores, mycelia, undoubtedly only the causa concomitans.

My work explains satisfactorily: 1. Where and why the membrane formation occurs in the pharynx and larynx. 2. How the membrane formation occurs, and of what it forms. 3. Why complications of bronchitis and pneumonitis appear. 4. When and under what conditions metamorphoses occur. 5. The metamorphoses may be: Diphtheritis pallida, diptheritis scarlatinosa, laryngitis membranosa, laryngitis membranosa crouposa, laryngo tracheitis membranosa.

After stumbling through this maze of polysyllables we are confronted by a cruel condition for he says:

That the metamorphemena follow this modus propagandi cannot be exclusively shown by medical investigation, for it lies in the province of the entomologists, whose competent decision of my correct or incorrect observation we must first obtain.

Entomologists owe it to themselves and to humanity to render this decision immediately. Refer the subject to the Bureau of Animal Industry of the Agricultural Department, which might spare time from investigating pork to settle this other parasite for the benefit of the nations. If they will do so the author promises:

On the discovery of this problem I will be able to place in the hands of medicine the proper and fitting key to a large group of intestinal diseases, as soon as the opportunity is given me for further researches.

Procul, O procul este profani.

Translations.*

MARIE B. WERNER, M. D.
PHILADELPHIA, PA.

James Israel in a dissertation on operations of malignant tumors of the kidney, states that if all published results of extirpation of the kidneys for malignant growths were grouped together, the resulting mortality rate—(50 to 61 per cent.)—show very discouraging figures. Some surgeons consider the operation, owing to these statistics, as improper. Israel has, however, arrived at the opposite conclusion based on his own favorable results. Among fifty-four operations on the kidney, he performed extirpation for malignancy eleven times with two deaths—eighteen per cent. Of the nine recovered; two died respectively six and thirteen months after operation from a metastasis; one of these, was a child of five years, in which the sarcoma filled the entireabdomen. The seven remaining cases have remained cured; in three cases five and a-half, four and two years have elapsed, in the remaining it is nine to two months since the operation.

Early diagnosis and improved technique will, in Israel's estimation, materially lower the mortality rate of these formidable operations.—*Deutsch. Med. Zeit., November 3, 1892.*

M. Von Strauch, (*St. Petersburg Med. Woch., 1892*) reports a case of myomectomie on the pregnant uterus in a patient, æt, 28, who gave a history of repeated attacks of peritonitis, and suffered later of dysmenorrhœa, which was cured by excisions of the vaginal portion of the uterus. She presented herself to Von Strauch during her fourth month of gestation, complaining of pain in the lower left half of the abdomen. An examination revealed a movable mass about the size of a goose-egg, situated to the left of the uterus. A diagnosis of subperitoneal fibroid of the uterus was made, in a month this doubled its size and ten days later showed signs of softening with increase of pain. An operation proved the mass to be a softening fibro-myoma attached by a short, but distinct, pedicle to the left cornus of the uterus. Recovery Complete.

A. Bür reports five interesting abdominal sections (*Deut. Med. Woch., 1892*): The first was an extirpation of tubercular mesenteric and retro-peritoneal glands. Recovery. The second invaginated bowel at ileo-cæcal junction—artificial anus. extirpation of the intussuscepted portion—enteroanastomosis—death. The fourth: through contraction of the mesentery numerous diverticulæ were formed which finally produced stenosis of the flexura sigmoidea—section—intestinal resection—artificial anus—death. The fifth a herniotomie which also included the vermiform appendix—recovery—*Centralb. f. Chirurg., April 4, 1892.*

Abstracts.

RADICAL TREATMENT OF HYDROCELE.

By THOMAS S. K. MORTON, M. D.

In an instructive paper the author presents the following conclusions:

1. Simple tapping, the injection of tincture of iodine or carbolic acid, and aseptic incision (with or without excision of a portion of the sac) are alone employed to any extent in the modern radical treatment of hydrocele.

2. Although other injection materials —notably bichloride of mercury solution and iodoform—have been commended, yet clinical proofs of their efficiency are lacking.

3. Simple tapping, under full antisepsis, may be relied upon to relieve any hydrocele and will cure a small percentage of cases.

4. The injection of moderate amounts of tincture of iodine (℥ j to ℥ iv) or carbolic acid (m.xx to ℥ j) will cure about 85 per cent. of the simplest forms of hydrocele. These two agents appear at present to stand almost upon an equality as regards percentage of cures and complications, but the acid has the advantanges of not giving rise to pain or shock and produces a much shorter period of disability; it appears also to be steadily gaining in popularity, and has cured many cases where the previous use of iodine has failed.

5. Cocaine should not be employed to prevent the pain incident to injecting

*Translated for the Medical and Surgical Reporter.

iodine, on account of its erratic and occasionally fatal constitutional effects.

6. The following conditions should prohibit any attempt at a radical cure by irritant injections:

a. Disease of the testicle or cord.

b. Hydrocele complicated by hernia or the presence of a hernial sac, or where there is any doubt as to the relations of the hydrocele sac.

c. The presence of multiple cysts.

d. Cloudiness of contained fluid.

e. Thickening or tuberculosis of the cyst walls.

f. Presence of considerable pain.

g. Presence of syphilis, tuberculosis or any depraved physical condition. Potassium iodide will cure most hydroceles of syphilitic origin.

h. Where communication with the abdominal cavity cannot be excluded.

i. The failure of previous attempts to cure in this manner.

j. Great size of cyst.

k. Extreme old age or where the cyst is developed in childhood.

7. A considerable time should be allowed to pass after reaccumulation of fluid following injection before undertaking other treatment, as the effusion is apt to be inflammatory and to disappear in time.

8. While many complications and even deaths resulting from attempted radical cure by the injection method are on record, yet most of these can be traced to violation of the above mentioned contraindications, to the employment of too large a quantity of the irritant, to the neglect of antisepsis, and to injecting into cellular tissue.

9. The method of tapping and injection is the method *par excellence* for those not familiar with the technique of surgery.

10. Permanent cure may be anticipated with almost absolute certainty, where the operation of incision and packing of the sac is performed. Failures under the Volkmann method can often be traced to:

a. Overlooking small secondary cysts or cartilage-like bodies, or failures to recognize disease of the testicle or cord.

b. Attempting to secure primary union.

c. Too early removal of the drain tube, where that method of drainage has been made use of.

d. Too small an incision.

11. The substitution of gauze packing for the drain tube in Volkmann's operation will probably prevent most of the complications that have been reported, and secure, with proper attention to minute secondary cysts, a uniformly radical and safe cure.

12. The death rate from simple incision and drainage is no greater than is that from injection of iodine. Sepsis and careless hemostasis are responsible for almost all complications and reported fatalities.

13. Excision of a portion of the sac—Bergmann's operation—is probably unnecessary and unjustifiable except where the tunic is exceedingly thickened or otherwise extensively diseased, as when containing calcareous patches or tubercular infiltration.

14. Incision of the sac may be performed under any of the conditions which contraindicate irritant injections except extreme youth, and certain constitutional conditions.

15. In double hydrocele both should never be injected at the same time, but double incision may be done when the local and general conditions are favorable.

16. A radical cure can only be promised when incision is employed.—*Philadelphia Polyclinic.*

ELASTIC CONSTRICTION AS A HÆMOSTATIC MEASURE.

By NICHOLAS SENN, M. D., Ph. D.

PROFESSOR OF PRACTICE OF SURGERY AND CLINICAL SURGERY, RUSH MEDICAL COLLEGE, CHICAGO.

Dangers Attending Elastic Compression of a Limb.—Compression of a limb by an elastic bandage, as a preliminary step to elastic constriction, secures for the tissues at the seat of injury or the field of operation perfect ischæmia, but is attended by two sources of danger:

1. When resorted to in the treatment of a recent injury or an infective inflammation, it might force pathogenic microbes from the wound or the seat of inflammation into the general circulation, thus adding a general to a local infection, with all the additional risks incident to such a condition.

2. In operations for malignant disease, carcinoma or sarcoma, it might force tumor-cells into the surrounding tissues, or through the lymphatic or blood vessels into the general circulation, causing thus

regional or general dissemination of the disease. These two sources of danger are not imaginary but real, and every surgeon with considerable experience can recall instances where elastic compression could be made answerable for the diffusion of an inflammatory process or the dissemination of a malignant tumor. Fortunately, Lister's experiments on the horse have demonstrated that, for all practical purposes, bloodless operations can be made without the use of the elastic bandage by simply placing the limb in a vertical position for a few minutes prior to the application of the constrictor.

Diminution of Blood-Supply to the Limb by Gravitation.—The influence of the force of gravitation on the supply of a limb becomes apparent by placing the arm in different positions. If one of the upper extremities is allowed to hang by the side of the body, and the muscles are fully relaxed, the veins become turgid, the capillaries distended, and the volume and force of the radial pulse markedly increased, and a sense of fullness and weight is experienced. If the arm is now elevated and held in the vertical position, within a few minutes the cyanosed appearance of the skin disappears and gives way to pallor, the overdistended veins collapse and are emptied of their contents, the radial pulse loses much of its volume and force, and the sense of weight and fullness is promptly relieved. If the limb is maintained in this position for five minutes, it is emptied of blood sufficiently to render operations, for all practical purposes, bloodless at any point below the elastic constriction. If an anæsthetic is used, elevation of the limb and the application of the elastic constrictor should not be done before the patient is thoroughly under the influence of the anæsthetic, as muscular relaxation is a material aid in securing a comparatively bloodless condition of the limb.

Form and Application of Constrictor.—Many surgeons have been in the habit of using a small solid rubber cord or a rubber tube of small size as an elastic tourniquet. Both of these forms of elastic constrictor are objectionable, as in either instance linear constriction is made, which particularly if the force employed be excessive as is so often the case, is so liable to cause temporary or permanent damage of some of the important tissues interposed between the skin and the underlying unyielding bone. The compression should include a ring at least two inches wide, in order to distribute the pressure over a larger area, in which event important structures are more likely to escape injury.

The best instrument for elastic constriction is a strong band of rubber at least an inch in width, of which at least two turns are applied side by side. In the absence of such a constrictor a soft rubber tube half an inch or more in diameter, an ordinary rubber bandage, or an elastic suspender should be used. As soon as the limb has been drained of its blood to the requisite extent by position, the constrictor is applied with sufficient firmness to interrupt at once both the arterial and the venous circulation. Simple as this advice may sound, it is nevertheless a fact that frequent mistakes are made in applying the constrictor properly. It is of the utmost importance that the pressure should first be made on the side of the limb occupied by the principal blood-vessels. If pressure is made first on the opposite side of the limb, the superficial veins are constricted first, and before the arterial circulation is interrupted, the limb presents a cyanotic appearance caused by an intense passive venous stasis. If, on the other hand, the elastic pressure is applied in such a manner as to arrest the principal arterial blood-supply first, venous return in the superficial veins is not interfered with until the circular constriction is completed, and the limb below the constriction is then in a comparatively bloodless condition, and remains so after the application of the constrictor. Some tact and experience are necessary in regulating the force required to interrupt quickly and completely the arterial and venous circulation. Less force is required, of course, when the main blood-vessels are near the surface and close to a bone than when a thick layer of muscles is interposed between skin and blood-vessels and the underlying bone. Pressure beyond the required degree, especially if continued for an hour or more, is liable to result in injury of muscles and nerves, and should be carefully avoided. Instead of using the chain or tying the constrictor in a knot, it is better after encircling the limb at least twice to cross the constrictor and fasten it between the blades of a

heavy hæmostatic forceps. A well-recognized disadvantage of elastic constriction as a hæmostatic measure is *increased parenchymatous hæmorrhage.*

The profuse capillary oozing which so often follows the removal of the elastic constrictor, is undoubtedly, at least in part, due to a temporary vaso-motor paresis caused by the constriction. This result is obviated most successfully by keeping the limb in an elevated position at the time the constrictor is removed, and by maintaining this position for at least six hours. The intravascular tension is reduced to a minimum by elevation of the limb, and this condition is most conducive to the formation of a minute thrombus in each of the small vessels—capillaries, arteries and veins--divided during the operation. Another exceedingly useful resource in diminishing unnecessary loss of blood, after all visible vessels have been ligated and the constrictor has been removed, consists in making firm pressure against the wounded surface. This is most effectually done by using a moist compress of gauze large enough to cover the whole surface, which is firmly held against the wound with one or both hands. After an amputation, for instance, all the principal vessels should be sought for and tied before the constrictor is removed, and the limb held in a vertical position. A compress of moist gauze is then placed against the wound surface, the flaps brought over it, and firm compression made over the end of the stump with both hands for at least five minutes. If the capillary oozing does not yield to this treatment, the wound should be irrigated with sterilized water at a temperature of 110° F., which makes a delicate white film on the surface, and has a very prompt effect in definitely arresting the bleeding. In obstinate cases the addition to these expedients of an application of peroxide of hydrogen serves an excellent hæmostatic purpose, and does not interfere with primary union of the wound.

Other complications arising directly from elastic constriction are:

Temporary Loss of Muscular Power, and Nerve Paralysis.—These consequences undoubtedly are often the direct outcome of a faulty use of the constrictor. The experiments made by me show conclusively that firm constriction, continued for several hours, almost invariably results in loss of function of the limb, which continues for several days or weeks. In these instances the disability was undoubtedly due to injury of the constricted muscles. If in the use of the constrictor more force is used than is necessary to interrupt the circulation, and particularly if linear pressure is made, injury of the muscles exposed to this undue pressure is very likely to be produced. The same can be said of injury to the nerves from the same cause. Two cases of nerve paralysis resulting from elastic contriction have occurred in my own practice.

For the purpose of preventing injurious pressure on nerves from elastic constriction, it is necessary to tie only with sufficient firmness to interrupt the arterial and venous circulation, and the pressure should not be linear, but distributed over a wide area, a ring at least one inch or two in width. The last requirement is best attained by using a wide band, or if an elastic tube or cord is used, the limb should be encircled several times, each turn drawn with uniform force and arranged in such a manner as to compress with equal firmness a wide circle, thus exerting the same effect on the tissues underneath as pressure made by a wide band. If for any reason the constriction cannot be made at a point where the principal nerves are well protected by a thick layer of muscular tissue, a thick compress of gauze ahould be placed between the constrictor and the limb, in order to protect the nerves against injurious pressure.

Necrobiosis and Gangrene Following Elastic Constriction. — Experimental research has shown that an ischæmic condition and elastic constriction, for two hours or more, are liable to produce an unfavorable influence on the karyokinetic processes in the tissues deprived of blood for this length of time. This is sufficient proof that prolonged constriction retards the healing process. Necrobiosis, slow healing, and necrosis of margins of the wound, are some of the remote consequences which follow prolonged constriction of a limb.

In the use of Esmarch's constrictor in arresting hæmorrhage that threatens life, it is practically not necessary to distinguish between venous arterial hæmorrhage. It was the consensus of opinion of the members of the military section of the last International Medical Congress in

Berlin, that it is no longer wise nor practical to differentiate between arterial and venous hæmorrhage, in rendering the first aid to the wounded on the battle-field, or in a case of accidental hæmorrhage; that the one point that must be taught the soldier, the brakeman, and the conductor, is that if hæmorrhage is so profuse as to threaten life before medical aid can be summoned, it should be at once arrested by elastic constriction,—by a suspender if nothing else is at hand,—applied invariably on the proximal side of the seat of injury. The constriction must be made with sufficient firmness to arrest completely both the arterial and venous circulation, as has been repeatedly insisted upon above. By applying the constrictor only with sufficient firmness to diminish the arterial circulation the venous hæmorrhage is increased. It is by overloading the tissues with venous blood by imperfect constriction that gangrene is invited and venous hæmorrhage increased.—*Internat. Medic. Magazine.*

BOOKS RECEIVED.

[In sending books for notice in the REPORTER, publishers are requested, for the information of the reader, as well as for their own advantage, to give the price. This announcement by title will be followed, in most cases, by a review, which will appear at the earliest opportunity.]

The Medical News Visiting-List, 1893: Thirty patients per week. Philadelphia: Lea Brothers & Co., 1892.

The Students' Quiz Series. Edited by Bern B. Gallaudet, M. D., Demonstrator of Surgery, College of Physicians and Surgeons, New York. Volume 13. *Diseases of Children.* By C. A. Rhodes, M. D., Instructor in Diseases of Children, New York Post-Graduate Medical School. Pocket size, 12mo., 170 pages. Limp Cloth: $1.00. Philadelphia: Lea Brothers & Co., 1892.

Anatomy (Double number): By Fred J. Brockway, M. D., Ass't. Demonstrator of Anatomy, College of Physicians and Surgeons, New York; and A. O'Malley, M. D., Instructor in Surgery, New York Polyclinic. Philadelphia: Lea Brothers & Co. Price $1.75.

Histology, Pathology and Bacteriology: By Bennett S. Beach, M. D., Lecturer on Histology, Pathology and Bacteriology, New York Polyclinic. Philadelphia: Lea Brothers & Co. Price $1.00

Text-Book of Nervous Diseases; Being a compendium for the use of Students and Practitioners of Medicine: By Charles L. Dana, A. M., M. D., Professor of Nervous and Mental Diseases in the New York Post-Graduate Medical School, etc.; with two hundred illustrations. New York: William Wood & Co., 1892.

Consumption and Kochine (Tuberculosis Kochii), II (August, 1892).

Original Observations and Reports Based on Individual Experience: By Dr. Rudolf Seiffert, Graduate of the Universities of Vienna and Heidelburg, etc. Authorized translation by Wolf Von Schurward, Chicago. Ackermann & Eyller, 86 Fifth Ave. Price $1.25.

The Physician's Leisure Library. Geo. S. Davis, Publisher. Issued monthly. Price 25 cents.

Fissure of the Anus and Fistula in Ano: By Dr. Lewis H. Adler, Jr.

Acne and Alopecia: By L. Duncan Bulkley, M. D.

Diseases of the Chest, Throat, and Nasal Cavities, including Physical Diagnosis and Diseases of the Lungs, Heart, and Aorta, Laryngology and Diseases of the Pharynx, Larynx, Nose, Thyroid Gland, and Œsophagus. By E. Fletcher Ingals, A. M., M. D., Professor of Laryngology and Practice of Medicine, Rush Medical College. Professor of Diseases of the Throat and Chest, Northwestern University Woman's Medical School; Professor of Laryngology and Rhinology, Chicago Polyclinic, etc., etc. Second edition, revised and enlarged. 240 illustrations. Octavo, 700 pages, extra muslin, price, $5.00. William Wood and Company, New York.

Periscope.

THERAPEUTICS.

In response to inquiries concerning drugs recently introduced the values of which are yet *sub judice,* THE REPORTER presents, in the following notes, the latest available information:

LOSOPHAN.

Saalfield (*Therap. Monatsh.*, October, 1892) describes the use of losophan (triiodocresol) in skin diseases. He has found it of special value in parasitic affections of the skin, both vegetable and animal. In sixteen cases of tinea tonsurans of the face and body, thirteen were cured and three much improved, and in three cases affecting the scalp, one was cured and the others much improved. In some cases of parasitic sycosis, good effects were obtained, but when necessary, epilation was also had recourse to. It was used in a one or two per cent. spirit and water solution. In pityriasis versicolor an ointment (one to two per cent.) gave good results, and in cases of pediculi capitis and pubis, a one per cent. solution was useful. Scabies, however, seemed to improve more rapidly under the more usual methods of treatment. In some cases of prurigo, chronic eczema with infiltration, sycosis vulgaris and acne vulgaris, and rosacea, this treatment was efficient. In psoriasis and primary syphilitic affections it was of little service as an anodyne application. As a drying powder (one per cent.) for wounds, it had but slight effect. It is contra-indicated in any acute skin disease owing to its irritant properties even in dilute solutions.—*Br. Med. Jour.*, Nov. 5th, 1892.

EUROPHEN.

Among the new surgical dressings europhen seems to have quietly taken an elevated position as a positive and complete

substitute for iodoform. It seems probable from recent investigations that we must rely upon some form or combination of iodine in order to secure a perfect, local antisepsis. The reports tend to coincide as to two or three very considerable advantages possessed by europhen. The chief of these lies in the fact that the iodine component of europhen is given off slowly, thus presenting fresh, or nascent, iodine to the tissues, and maintaining the healing processes. A further advantage in this slow development of iodine is, that it prevents the possibility of irritant or toxic action. This is why large denuded surfaces, like burns or scalds, may be fully covered with it, and not give rise to any untoward effect. Europhen, in fact, appears to be especially adapted to extensive lesions, since its coverning power is five times greater than that of iodoform, while its odor, though faint, is sufficiently well characterized to neutralize the peculiarly disagreeable fragrance attached to all surgical dressings. We note that recent clinical articles in approval of europhen in the dermatosis, traumatisms and ulcerations, as also in specific lesions have been written by Drs. Allen, Chappell, Shoemaker, Giles, Fernandez, Gilbert, Eichler and many others, who have extended the uses of europhen to ophthalomology, gynecology and rhinology as well as the needs of minor and general surgery.—*Ex.*

THE LOCAL USE OF PHENACETINE.

In a communication to the Tennessee State Medical Society. Dr. M. H. Lee, of Knoxville, presents the results of some very clinical tests made by him in the topical employment of phenacetine. Dr. Lee says: "Phenacetine has been largely and successfully used in hemicrania, rheumatism, neurasthenia, agina pectoris, and locomotor ataxia. Still, we claim a no less important office for this drug, and this is, its local application to ulcers." The writer then enumerates a large number of remedies he had tried in ulcerative conditions without obtaining satisfactory results. Finally at the suggestion of Dr. C. B. Lee, he tried finely powdered phenacetine, which was dusted over the ulcerations three times daily. "The effect," says Dr. M. H. Lee [the writer of the report], "was remarkable, and dated from the first application of phenacetine."

The first case presented, is that of a woman, æt. fifty, who, for five years, had had a syphilitic ulceration of the foot and leg. Anti-syphilitic treatment had been employed in conjunction with the usual topical remedies, without a satisfactory result. The internal treatment was continued and phenacetine applied locally. "The ulcers," says the writer, "began healing rapidly, while the pain vanished as by magic."

Case II. The ulceration had followed a severe injury to the hand, made with a saw. Bichloride gauze and iodoform had, unsuccessfully, been tried. Phenacetine was then employed, and, says the report, "the change for the better was noticeable at once; one week later the patient went to work."

Case III. Refers to a young man suffering from pyemia following a severe incised wound of the arm and hand. Various alteratives and antiseptics were used internally and externally without result. "Pulverized phenacetine was now used locally, with the same internal treatment [iron, quinine and strychina], from which time the improvement was rapid until the wounds healed."

Case IV. The patient, sixty years of age, had suffered for forty years from a chronic, indolent, syphilitic ulceration of the foot and leg. No treatment had proved effectual, and Dr. Lee found the patient suffering from uremia, incontinence of urine and an irritated skin, besides being delirious. "These symptoms," says the writer, "were treated on general principles, except the ulcer, which was dressed daily with phenacetine, and this cleaned out the dead tissue and caused healthy granulations to appear at once."

THERAPEUSIS OF PIPERAZIN.

Accepting the very clear and complete clinical researches of Biesenthal, Schweninger, Ebstein, Vogt, Gautrelot, Heubach, Bardet, and all other well known physicians, general practitioners have made many interesting tests of piperazin and have arrived at some very satisfactory conclusions concerning its value. Its chief therapeutic indication is the uric acid diathesis, or the dyscrasia resulting from that condition. It is, unquestionably, the most energetic solvent of uric acid, and uratic concrementa which may be employed with the human organism without producing toxic effects. With uric acid

it forms a neutral, soluble combination, while, at the same time, it dissolves the various albuminoids and their homologues. Prescribed in combination with phenacetine it has very marked influence upon the gouty condition and promotes the absorption of undesirable exudates. The value of piperazin in both acute and chronic gout, appears to be very decided. Schweninger reports success in ninety-two per cent. of his cases, and states that he could get no such results with any other remedy. Biesenthal also administered piperazin in gout, in renal colic, and in urinary hæmorrhage with perfect success. He gave it in carbonic acid water 1 to 500. The ordinary daily dose of piperazin is fifteen grains. Some clinicians begin with three grains per diam, or one grain doses t. i. d.

TRIONAL.

Boettiger [*Berl. Woch.*, October 17th, 1892] has used Trional in seventy-five cases in Professor Hitzig's clinic. The single evening dose is from one to two gms. [one to two gms. was mostly used]. It was occasionally given in divided doses during the day. Any systematic treatment was not interrupted. The cases fall into three groups: [1] Simple sleeplessness occurring in functional or organic nervous disease. Uninterrupted and mostly deep sleep occurred in from fifteen to forty-five minutes. In only one case was any giddiness or other ill effect noted on the following day. In some cases the drug was used every evening for two or three weeks without losing its effect. [2] Sleeplessness with bodily pain. Here the results were not nearly so good. In one case referred to of severe hypochondriasis, the result was variable according as there was pain. As regards morphine and cocaine habits, the author, unlike Schafer [Epitome, August 20th, 1892, par., 166] found it useful in one case. (3] The third group, including patients with mental disease, is divided into two parts according as the sleeplessness was accompanied by moderate or severe mental excitement, etc. In only two of twenty-two cases of the former class was there no hypnotic action. The drug had no effect on the mental condition. In the second class the results were variable. Whether larger doses would have been more efficient is doubtful; unpleasant results have been noted after such larger doses. The author refers to five cases of mental disease with marked excitement, in which fractional doses were given with the best results, but he adds that the number of the cases was too small. The drug was given by the rectum, usually in two g. doses, in sixteen cases. It acted as promptly and effectively as when given by the mouth. The drug is without effect in sleeplessness due to bodily pain, in acute alcoholism and in cases of great mental excitement and motor restlessness. Trional has a more marked and prompt action than chloralamide, two g. of the former corresponding to three or four g. of the latter. Amylenhydrate approaches nearer to Trional in its effects. In some cases Trional may take the place of hyoscine, yet the subcutaneous injection of the latter is preferable in great mental excitement.—*Ex.*

SALOPHEN.

CAN WE ADMINISTER THE REMEDY? At this season of the year we get our most refractory cases of rheumatism, and the old questions arise: Can we increase the doses of our remedy? Will the gastric, nephritic or cardiac functions of our patients permit a further use of the medicaments in which danger, discomfort, or perhaps failure are involved? In reviewing the combinations of salicylic acid with various bases, and especially with the phenols, the physician feels that he has here several weapons of requisite power provided the patient can withstand their use. The personal equation is the cause of trouble, and it cannot be ignored. These causes seem to have induced many able practitioners to promptly test a new remedy—paramiodosalol—which, under the name of Salophen, makes exceptionally high claims as a safe and effective medicament in acute rheumatism. In the *N. Y. Med. Jour.*, July 30th, 1892, Dr. Wm. H. Flint presents a series of cases in which he has tested Salophen for the condition cited. His conclusions are clearly and decidedly given, as follows:

"No relapses occurred and no complicating endocarditis, pericarditis, or pleuritis appeared. From these facts the writer concludes that we possess in Salophen a remedy equally potent as the other salicylates to control the symptoms of acute rheumatic arthritis, but devoid of their tendency to weaken the heart's action, to disturb the stomach, and to produce albu-

minuria and smoky urine."

Salophen was administered in doses of fifteen grains every three hours, or thrice daily, with ten-grain doses of bicarbonate of soda given at the same time. Dr. Flint's conclusions are amply confirmed by those of Frölich [Vienna] who states [*Wein. Med. Woch.*, Nos. 25, 6, 7, 8, 1892] that "Salophen has shown itself a prompt and rapidly acting remedy against acute rheumatism," and that "It may be administered, even in large doses, for a long time, without the disagreeable after-effects of other salicylic or phenolic preparations." Gutmann, Siebel, Goldmann and others testify also, to constantly successful results from the exhibition of Salophen in arthritic conditions, and it is not improbable that the employment of this new derivative will not, in private practice, be attended with the professional anxiety inseparable from the treatment of rheumatism with more or less toxic compounds.

PHENOCOLL IN THE TREATMENT OF MALARIA.

Phenocoll, a derivative of phenacetine, has been tried by P. Albertoni (*La Riforma Medica*, February 5, 1892; *Revue de Thérapeutique Générale et Thermale*, June, 5, 1892) in thirty-four cases of malaria. A permanent cure was obtained in twenty-four; in five the results were doubtful; and in the other five the drug failed to do any good. Some of the patients cured by phenocoll had suffered severe relapses after treatment with quinine. Phenocoll was given, in form of powder, in doses of fifteen grains (one gramme), six or seven hours before the expected paroxysm, and after the disappearance of the paroxysms, to prevent relapses, the medicament was continued for some time after. The new remedy has no unpleasant after-effects, and the taste is easily disguised by mixing it with sugar. In this manner children take it readily.—*Univ. Med. Mag.*, Sept., 1892.

THIOL IN INFANTILE THERAPEUTICS.

Dr. Moncorvo has employed this new antiseptic agent in more than one hundred infantile cases for the purpose of diminishing suppuration and for the removal of cutaneous growths, either of parasitic origin (tinea tonsurans, favus, pityriasis, etc.) or dependent upon general dyscrasiæ (tuberculosis, syphilis, etc.). Thiol may be used with equal efficiency in the dry form (thiol powder), pure or rubbed up in vaselin (five to ten per cent.), or in liquid form, pure or diluted with boiled sterilized water.

The topical use of thiol was never followed by the least untoward local or general effect. The therapeutical effect was satisfactory in every case. It was used, without fear of danger, on the youngest children. (The author has used thiol in treatment of erysipelas and lymphangitis in adults with the greatest success.—*The Satellite.*

Dr. Montague Gunning used a solution of chloralamid with potassium bromide in two cases of sea-sickness with most satisfactory results. The first case was that of a gentleman who previously had never suffered from the affection. After the vessel had left land about three hours he began retching and continued doing so for three hours. Dr. Gunning then prescribed the chloralamid solution, which gave immediate relief, bringing on refreshing sleep from which the patient awakened practically recovered. The other victim was a lady who had suffered for hours, but who slept for an hour after one dose of the remedy and was not again troubled with sea-sickness. The author was so favorably impressed with the action of the remedy that he hastened to call attention to it in the *British Medical Journal.* There is now a good quantity of evidence of this kind.

An interesting contribution to our knowledge of the therapeutics of phenocoll and piperazine comes from South Africa. Dr. J. O. Ungerhausen, District Surgeon of the Lion's River Division, writing from Houick, reports the very satisfactory results yielded by phenocoll hydrochloride in various cases of influenza and ordinary cold, when the mucous membrane of the upper respiratory passages was swollen and inflamed. The cold developed more rapidly and ran a milder course, headache being removed. A beneficial influence was also observed on the bodily temperature in several cases of diphtheria, when it was prescribed in combination with benzoate of soda. The same observer used phenocoll and piperazine in a few cases of gout; the results were unexpectedly suc-

cessful, so that Dr. Ungerhausen expresses the opinion that this combination is more effective than any remedy hitherto proposed.—*Ex.*

THIOL: ANTISEPTIC REDUCING AGENT.

Thiol is a synthetical product recently introduced, which closely resembles ichthyol, both in its chemical composition and therapeutic properties, but is free from some of the objectionable features of the latter. It has not the unpleasant odor of ichthyol and does not stain linen; it is also free from irritant effect which ichthyol often manifests. The usual form is a dark liquid, containing forty per cent. of the base; but it can be obtained pure in scales or powder.

Being regarded as a purified ichthyol, it has been used in all the affections in which ichthyol has been found beneficial, and as rule, with equally good if not better results. Prof. Schweninger, after a thorough trial of the remedy in his clinic in Berlin, regards it as superior to ichthyol.

It has marked effects in causing the absorption of pelvic exudates. Large inflammatory masses and adhesions may be often removed in a few weeks. It is well applied on tampons in five per cent. solution in glycerin, renewed every second or third day, and it is well to administer it internally at the same time. Erosions of the cervix are also very promptly healed by this treatment. Used as it occasionally is, in very strong solution, fifty per cent. or over, it acts much as tincture of iodine, causing a sensation of burning, with loss of the epithelium. In endometritis, which resists the usual modes of treatment, a speedy cure is often effected by applications of pure thiol made weekly.

While recommended in many skin diseases, there is one affection in which this remedy acts remarkably well, and that is in facial erysipelas. Used with lanoline in the strength of fifteen to twenty-five per cent., it will effect a cure often in two days, and rarely has to be used over four or five. This ointments should be spread on cloths and kept constantly applied.

In burns, frost-bites and chilblains a ten to twenty per cent. thiol-lanoline ointment is an effective application. For external applications the dry powder is often used, being incorporated with oxide of zinc or with bismuth, in the proportion of five to ten per cent.—WASHINGTON DODGE, M. D., in *Pacific Med. Journal.*

SURGERY.

BRAIN ABSCESS RESULTING FROM SUPPURATIVE OTITIS MEDIA.

A patient, æt. 30, had suffered for a number of years with middle ear inflammation on both sides. During a few days he had also had intense pain on the right side. There was great tenderness over the right mastoid and parietal bone, and paralysis of the right facial nerve. For a few days there had been disturbance of the sensorium, hemiplegia and hemianæsthesia on the left side, muscular twitching in right arm and leg. Opening the mastoid temporarily improved the symptoms. Soon after, external strabismus of the right eye appeared. Trephination was, therefore, made at the right of the second temporal convolution. The dura mater was injected, and greatly pressed forward. An incision into the brain gave exit to soft, degenerated brain substance and sero-purulent fluid. No distinct cavity or pus-sac was found. Death followed in eight days. The autopsy revealed extensive necrosis of the right mastoid process, with corresponding circumscribed pachymeningitis, with softening of the whole right cerebral hemisphere, hemorrhage into temporal convolutions, and secondary meningitis.—*Centralblatt f. klin. Medecin*, 1892.

THE STRAIGHT TUBE THE SIMPLEST CATHETER.

Ziegenspeck (*Centralblatt für Gynakologie,* 1892), states that Wolfner recommends a simple straight tube for the female bladder. His reasons are:

1. The conical end is more easily arrested in folds of the mucous membrane and leads to false passages.

2. The catheter with side opening is more difficult to disinfect.

3. The catheter with the blind ends and side openings has a lost space which it compels us to insert and prevents the walls of the bladder lying upon one another, when it is emptied; also the lost space conveys air into the bladder.

4. By swelling of the mucous membrane, or spasm of the muscular coats, the mucous membrane is pressed into the eye of the catheter making its withdrawal difcult.

5. Foreign bodies, as sand, mucus.

etc., pass with more difficulty through the indirect passage afforded by the opening on the side.

Kustner, in 1890, suggested glass as the best material for the tube. His catheters measured 10 cm. and were cut obliquely on one end.

Ziegenspeck recommends the Kustner instrument which possesses all the advantages of Wolfner's and is easier to clean. The obliquely cut end affords a larger opening, and consequently easier emptying of foreign masses. In healthy bladders he does not advise the use of obliquely cut tubes. He thinks a slight curve to Kustner's glass tube would facilitate its passage in some cases, and would not interfere with the ease of cleansing it. Glass, he thinks is the best material for these tubes, as it can be easily bent, its transparency enables any uncleanliness of the instrument to be detected, and it can be sterilized by heat.

In washing out the bladder, a rubber tube is attached to the outer end, by which the nozzle of a syringe may be connected, the bladder filled and the fluid allowed to run out. The advantages of this over the double current catheter consists in the fact that the bladder is stimulated to contract, whereby the antiseptic solution finds its way deeper in the tissues; that air-bubbles are not passed into the bladder along with the injecting fluid; its simplicity and cheapness; the readiness with which it can be improvised.

In washing out the female bladder, at times he introduces the glass tube while the injecting fluid is streaming through. The fluid returns along the side of the catheter. His method of preparing his catheters consists in cutting glass tubing in pieces 10 to 12 cm. long, and melting the cut ends in the flame of a spirit-lamp until well rounded.

OBSTETRICS.

THE VALUE OF ANÆSTHETICS IN OBSTETRICS

Dr. A. Düherssen (*Berliner Klinische Wochenschrift*, No. 15, 1892), calls attention to the many cases in which anæsthesia is of service in obstetrics. He fears that while specialists are perfectly accustomed to its use, too many physicians make little or no use of it. Doubtless, in some cases, this is because there is no other physician at hand to administer the anæsthetic. When he has occasion to perform an obstetrical operation, and is alone with the midwife, he himself prepares the patient for the operation, placing her in the proper position; then he disinfects himself, then the patient, and after this devotes himself entirely to administering the anæsthetic. As soon as the anæsthesia is complete, he brushes off his hands once more with the disinfecting solution, and proceeds to the operation himself.

Obstetrical operations are usually brief, so that one deep anæsthesia is usually enough to allow their completion. When this is not the case, the nurse may be directed, in case the patient awakes, to put one or two drops of chloroform upon a thin cloth mask, which lies over the patient's mouth. When managed in this way, he thinks there is no blame attaching to the physician should a bad result follow. The severe asphyxia occurs chiefly in the beginning of anæsthesia, later only when unreasonably large quantities of chloroform are applied. A man is protected from these asphyxias, or against the blame for them, when he devotes himself at first exclusively to administering the anæsthetic, and becomes, to a certain degree, simply the chloroformer.

Anæsthesia is very valuable for the patient, since it spares her pain. If she is suffering very much and tossing about, it may be impossible for the physician to make a complete diagnosis without producing anæsthesia. He then can ascertain if the infantile pulse is normal. The mother's pulse while narcosis lasts is also important; if it remains above 100, it is a sign something is wrong.

The internal examinations are vastly easier to make, and thus the physician is promptly able to make choice of the most suitable obstetrical operation. If it is a sensitive, first confinement, it may, on account of tense perineum, be difficult to reach high enough into the pelvis. If, in such a case, there also exists a considerable swelling of the head, which may reach clear down to the vulva, the physician is easily led to believe that the head is already well down in the pelvis, and that an extraction with forceps will be easily possible. In fact, the head may still be above the entrance to the pelvis, and the use of forceps would be difficult or impossible; in such a case, turning might be

possible later. When an anæsthetic is used, such errors are prevented, for the pelvis can then be thoroughly explored.

It is also very important to produce anæsthesia, in order to make correct diagnosis of abnormal presentations; especially is this the case when there is a posterior parietal presentation, or a deep transverse presentation; and it is valuable in all cases where the part presented is still high and we cannot make an exact diagnosis with one or two fingers, but need to introduce the whole hand,

The same is also true of the cases where some malformation, abnormally large head, etc., are met; also where no part is presented, or the presenting part is still high above the pelvis.

In the second place, anæsthesia is of valuable assistance in obstetrics in all those cases where turning needs to be assisted by the outer hand. Among these cases belong turning, and especially the combined turning of the child, the loosening of the placenta, and the presence of tumors; and when the os uteri is sufficiently dilated.

In the third place, anæsthesia has a very great value as a direct therapeutic agent, and that, too, used very superficially, in hastening the delivery, as in cases where the pains, although very great, do not accomplish much, and where the uterus does not relax properly in the pauses.

The production of anæsthesia is contra-indicated in cases of sepsis, or should at most be very cautiously undertaken, for so-called chloroform death has been seen in cases of sepsis. Chloroform death may follow an abortion at the very first breath of chloroform.

Deep and long-continued anæsthesia is contra-indicated in cases of eclampsia. The narcosis is very valuable in eclampsia, but only in order to permit an obstetrical operation; the earlier this is performed the better, as eclampsia affects the heart-muscle.

Narcosis is contra-indicated in cases of tetanus uteri, and where there is weakness of the heart.—*Therapeutic Gazette.*

MEDICINE.

BUFFALO LITHIA WATER IN THE TREATMENT OF RENAL CALCULI.

Albert Goodwin, of Eufaula Ala,., states that for a number of years he has prescribed Buffalo lithia water, with uniformly efficacious results, in gout, rheumatic gout, rheumatism, and all diseases of a uric-acid diathesis, and its extraordinary therapeutic value prompts him to report the following cases of renal calculi dependent upon a uric-acid diathesis relieved by its use after the failure of other approved treatment:

J. N. L., a cotton merchant, between forty-five and fifty years of age, was subject for six or seven years to frequent attacks of nephritic colic, and almost invariably passed a calculus after each paroxysm. The paroxysms finally became so freqneut that the colic was almost constantly present, rendering his existence miserable. Of necessity, resort was had to opium and other anodynes, with a view to mitigating his intense suffering, until he became a confirmed victim of the morphine habit. His nervous system was shattered, and he was indeed a mere wreck. In this condition, by Dr. Goodwin's advice, he visited the Buffalo Lithia Springs, Virginia. For several months previous there had been a continuous pain in the kidney, caused, as Dr. Goodwin thought, by retained calculi or incrustations in the pelvis of the kidney.

After a few weeks' use of the water of spring No. 2 the beneficial results were very marked, the paroxysms became less frequent and of less severity, and there commenced a free discharge of calculi and sand, which continued for some three weeks, gradually diminishing and finally ceasing altogether. This was followed by rapid improvement in his general condition, and some weeks afterward he retnrned home in full and vigorous health, having gained while at the springs forty pounds in weight. By the continued use of the water after returning to his home he was enabled to overcome the morphine habit entirely and lived some years, having no return of his old disease.

This water proved not less efficacious in a similiar case in Dr. Goodwin's own person. In October, 1890, he was attacked with nephritic colic of the severest type. Within a period of seven or eight weeks he had fifteen to twenty paroxysms, none of them lasting less than two hours, and most of them from six to fourteen. The free and continued use of Buffalo lithia water resulted in a total cessation of the attacks and the restoration of his genera

health, which had been much impaired. There has been no return of the attacks up to this date—August 15, 1892. He has prescribed this water in other similar cases with decidedly beneficial results, and has no equal among the medicines or mineral waters of which he has any knowledge. It is especially adapted, he says, to cases in men who are broken down by the long and continued use of alcohol and opium in their various forms.—*N. Y. Med. Jour.*

NASAL CATARRH.

Dr. Louis Jurist, Chief Assistant in the Laryngological Department at Jefferson Medical College, in lecturing on "Diseases of the Upper Air Passages" said that all those suffering from dyspepsia will have more or less disease of the upper air passages, and in order to effect a cure of the nasal or throat trouble the digestive tract must be treated, and very frequently the patient will be cured without any special treatment for the throat or nose. The doctor who depends entirely on local treatment of nasal affections will surely fail to cure the trouble. He called attention to the fact that women suffering with chronic uterine troubles very frequently will have some nasal affection. The first element in the treatment of nasal catarrh is cleanliness, and this is most important. This is best maintained by the use of an alkaline wash or spray. For the removal of odor any one of the following may be used: solutions of permanganate of potassium, boric acid, salicylic acid, creolin, or peroxide of hydrogen.—*College and Clin. Record.*

NEWS AND MISCELLANY.

THE S. D. GROSS PROFESSORSHIP OF PATHOLOGICAL ANATOMY FUND.

The committee appointed by the General Committee to audit the account of Dr. Richard J. Dunglison, Treasurer of the S. D. Gross Professorship Fund of the Alumni Association of Jefferson Medical College, respectfully report that after an examination of such account they find that there were sixty contributors to the fund, the total amount contributed being $3,499.10. In accordance with a resolution of the General Committee these contributions have all been returned to the donors, and the treasurer has presented a voucher for each amount thus refunded. A great portion of the whole amount has been retained undistributed until recently, so that the interest on the amount might so accumulate as to enable the committee to refund to each subscriber the full amount of his contribution, without any deduction for expenses of publication of circulars, postage, etc., which were necessarily heavy, from the widespread diffusion given the objects of the fund.

The names and addresses of the subscribers and the amounts contributed by them are as follows:

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THE SAMUEL D. GROSS PRIZE.

The first Quinquennial Prize of One Thousand Dollars under the will of the late Samuel D. Gross, M. D., will be awarded in 1893.

The conditions annexed by the testators are that the prize "Shall be awarded every five years to the writer of the best original essay, not exceeding one hundred and fifty printed pages, octavo, in length, illustrative of some subject in Surgical Pathology or Surgical Practice, founded upon original investigations, the candidates for the prize to be American citizens."

It is expressly stipulated that the successful competitor shall publish his essay in book form, and that he shall deposit one copy of the work in the Samuel D. Gross Library of Philadelphia Academy of Surgery.

The essays, which must be written in the English language, should be sent to Dr. J. Ewing Mears, 1429 Walnut St., Philadelphia, before June 1, 1893.

Each essay must be distinguished by a motto, and accompanied by a sealed envelope bearing the same motto, and containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay.

The Committee will return the unsuccessful essays if reclaimed by their respective writers, or their agents, within one year.

The Committee reserves the right to make no award if the essays submitted are not considered worthy of the prize.

INCESSANT HICCOUGH.

Reading in the daily press lately several accounts of a most persistent case of hiccough, which had lasted many days, and which was baffling the skill of the local medical fraternity, recalls to my mind a case of the same trouble which came under my care while a resident physician in Cook County Hospital, Chicago, of which case I find I have complete notes:

S. S., a Russian peddler, aged twenty-seven, admitted to the hospital, April 30, 1888. Had always been in good health; on admission complained only of a persistent and incessant hiccough, which continued night and day; it had already lasted one week; he was thoroughly exhausted from loss of sleep and the pain and soreness produced by the contractions of the diaphragm; the usual remedies for these cases, such as morphine, bromide and chloral, ether, cannabis indica, bismuth, soda and atropine, were each tried, but with little or no effect; morphine in large doses would relieve for one or two hours and allow the patient some sleep; electricity applied to the epigastrium and to the phrenic nerve was of no avail.

On examination over the region of the stomach, that organ was found to be considerably dilated and to contain a large quantity of fluid; there was no external signs of a pyloric obstruction; thinking that the dilation of the stomach and the retention of fermenting food might be a cause of the hiccough, I introduced a siphon-tube into the stomach and thoroughly washed out that organ; at least two quarts more of fluid were removed than had been introduced through the tube, and that which was removed was in a high state of fermentation. After this operation the hiccough entirely ceased, and the patient had his first good night's sleep in sixteen days. He was discharged two days later, with no return of the trouble.—*Col. Med. Journal.*

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY FROM NOVEMBER 20, 1892, TO NOVEMBER 26, 1892.

Leave of absence for one month is granted First Lieutenant James D. Glenna, Assistant Surgeon of Army.

Leave of absence for one month, on surgeon's certificate of disability, with permission to leave the limits of the department, is granted Major John C. G. Happersett, Surgeon of Army.

A board of officers, to consist of:—Colonel Joseph R. Smith, Assistant Surgeon General, of Army; Major David S. Huntington, Surgeon of Army; Major Benjamin F. Pope, Surgeon of Army, by direction of the President, appointed to meet at Whipple Barracks, Arizona, on Monday, November 28, 1892; or as soon thereafter as practicable, for the examination of Captain Louis M. Maus, Assistant Surgeon, with a view to determining his fitness for promotion, as contemplated by the Act of Congress, approved October 1, 1890.

Leave of absence for one month with permission to apply for an extension of three months is granted Captain S. W. Crampton, Assistant Surgeon of Army.

First Lieutenant, George J. Newgarden, Assistant Surgeon, (recently appointed) is assigned to duty at Fort Sheridan, Illinois.

First Lieutenant, Charles F. Kieffer, Assistant Surgeon, is relieved from duty at Fort Sheridan, Illinois, and assigned to duty at Fort Meade, South Dakota.

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ORIGINAL ARTICLES.

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Original Articles.

A CONTRIBUTION ON PATHI-FRACTURE AND LESIONS OF THE SOFT PARTS, WHICH INVOLVE THE ANKLE-JOINT.*

By THOMAS H. MANLY, M. D.
NEW YORK.

Physical violence is frequently a cause of moderate or serious injury to the anatomical structures which compose the ankle-joint. There are few who have reached, or passed middle-life that have not, some time, in varying degree, so wrenched this articulation that they have, for a varying period of time, experienced more or less temporary inconvenience. Besides these trifling, unimportant cases, there is a large number of a more grave and serious character; of a simple or a mixed nature, which may involve alone or conjointly the osseous or arthritic elements.

The ankle-joint, though subjected to the greatest strains, and the most exposed in the body, manifests, in a singular degree, the power of resisting inflammation, and is seldom permanently anchylosed, as a consequence of vulnerating force. Although classified by anatomists as ginglymus, nevertheless motion well-marked, though of a limited range, is permitted in the direction of abduction, adduction and rotation. The head of the astragalus is the fulcrum for the leverage and action of the distal end of the tiba. The function of the fibula is mainly to steady and support the ankle. This joint is supported and powerfully acted on, by four sets of tendons, which cross it anteriorly, posteriorly, laterally, the two former in locomotion, and the latter chiefly, in steadying the leg on the foot. The ligamentous envelope which ensheaths the tendons and binds the malleoli to the astragalus is of great density and strength, and, like the ligamentous insertion of the quadriceps at the knee, into the patella, is so firmly incorporated with the external surfaces of the bones, that when put on a great and sudden strain, it gives way before the ligaments divide.

The ankle-joint is so formed, that without its extensive tendinous and ligamentous braces, luxation must be a common event. In its normal state this is scarcely ever possible without fracture of the epiphyseal ends of the tibia or fibula or both. In the production of lesions, attributable to indirect violence, which expends its force on the tibio-tarsal articulation, the tarsus, the astragulus and calcaneum are always passive agents, while the sole active factors are the leg, or the articular ends, of its two long shafts.

Although the epiphyses of the tibia and fibula appear before the third year, their complete union, or fusion, with the diaphyses, is not complete until the twenty-fifth year. According to Cloquet, (1) this process of development is sometimes delayed until the fortieth year, and the process of ossification may remain imperfect through life. The tibia and fibula are bound firmly together at the ankle-joint by a strong ligamentous band, which makes their separation difficult. The fibular shaft, inferiorly, except within an inch of its distal apophysis, is everywhere covered by muscular tissue, and is bound to the tibia above the ligament by the interosseous membrane. The long, broad, flange-like process of the fibula, which constitutes its inferior articular end, extends much farther down the lateral wall of the astragalus than its fellows. Its articulation with the head of the astragalus, though continuous with that of the tibia, is horizontal. The function of the

* Read at Annual Meeting of New York State Medical Association, Nov. 10, 1892.

1 *Anatomie des Os du pied*, p. 167. Cloquet.
1 *Anatomie des Articulations*, p. 203, ed. ii.

fibula, then, is severely limited to steadying, and not supporting the leg on the foot. The head and shaft of the fibula consist of more compact than cancellous tissue, hence are less resilient and more brittle than the tibia. The inner surface of the latter bone, from its superior articulation to its inferior, is wholly uncovered by muscular tissue; and as this bone in locomotion is subjected to constant concussive forces, it is rich in cancellous tissue, and is elastic.

Having thus far examined very briefly, into the structures and their arrangement which enter into the proximal segment of the ankle-joint, and the parts with which they are in immediate contact, it will be easier to intelligently appreciate those abnormal conditions here situated, which arise from accident. These may be divided into lesions of the soft parts; the tendinous, ligamentous and cartilaginous; and into those lesions of an osteo-arthritic character, in which there are combined, fracture and dislocation. Free action at the ankle-joint may be destroyed and a permanent crippling remain, after a severe sprain at this articulation, which primarily in no way affects the bones. Many of these sprains, if not so serious, may, however, give as much or more pain than a fracture, or require a longer time to recover from.

The pathological elements which enter into a severe sprain are entitled to summary review, in order to estimate the extent of injury as well as forecast the probable results; and, at the outset, it may be well to remember that the appearance of the soft parts, which enclose the joint, or are continuous with it, often bear no relation to the gravity of the injury. In a given case we may find the integuments greatly tumefied and discolored for a considerable distance above and below the joint, yet the patient has little pain, unless on motion, and in a short time recovers full functional use of the joint. With another, although the swelling is only moderate and there may be but slight if any ecchymosis, yet pain lingers, the inner surface of the dorsum of the foot is extremely sensitive to pressure, and this pain extends up along the leg, over the thecal envelopes of the tendons.

With these sprains of a more grave description it may be quite impossible to put any weight whatever on the foot. With those minor sprains of the first-class, there is always a free extravasation of blood into the capsule of the joint; often associated with a laceration of and leakage from the thin-walled veins in the cellular membrane. Hæmorrhage into a joint is quickly absorbed and gives rise to little inconvenience; the over-tension of the tendons and contusion of the parts promptly giving way to the bath, bandage and rest.

With the more severe phase of ankle sprain, important structures have been severely injured, and amytrophic changes with limitation or diminution of joint-action is sure to follow, if active and appropriate measures are not employed early. With many of these the ligaments have been ruptured, the nerves over-stretched or lacerated, the capsule of the joint over-strained; and with the bones, their periostial envelope or their cancellous elements may take on inflammatory changes. When the injury has not been very great, or vital parts have not sustained serious damage, and the patient has a sound physique, full functional restoration is generally secured.

Certain sprains of the ankle attended with over-strain of the tendons, and followed by inflammation of the synovial lining of the thecal envelopes of the tendons, synovitis, neuritis, periostitis, and arthritis, may end in anchylosis or muscular atrophy, with a weak, painful articulation. In one of these cases which I have seen, although there was moderate motion in the joint, yet along the cutaneous filaments of the internal division of the plantar and internal saphenous nerves, hyperæsthesia was most acute on the slightest motion, and locomotion, without the aid of crutches, was quite impossible for a long time.

In all the other cases which I have examined, there was anchylosis present, muscular or osseous. In some of them there was a retractured state of the sural muscles, requiring the use of a raised heel in walking. It goes without saying, that should this immobilized state of a joint be permitted to continue long enough, muscular wasting must invariably follow, with degenerative or organic changes in all the structures of the leg, ankle and foot.

Contusions of the Ankle.—Contusions of the ankle are always the result of direct violence, as kicks, blows or crushing injuries. Perhaps the most severe of the latter type which we encounter, are in large, modern cities or villages, occuring

in consequence of railroad injuries. The lower third of the leg to the heel, is mostly devoid of muscular tissue, as it is in its upper portion that the greater part of the muscles taper into tendons. In females this region is rotund, the bones being well covered with a thick layer of adipose tissue. In the healthy, active male, but little fat is lodged here; hence the bones and sinews are very superficial. This is preeminently the region of the body in which the consequences of degenerative, vascular changes may be most frequently seen and studied. It may be said, that fully 25 per cent. of all adults, either before or after fifty years of age, present disturbances of nutrition in the lower region of the leg; the subcutaneous cellular tissue undergoing absorption, the skin, through atrophic changes, parting with its natural color, vascularity, mobility and thickness, becoming on the inner aspect, very thin, brittle and intimately adherent to the underlying bone surface; the walls of the inner saphenous vein, with the superficial and deep tributary trunks, as a result of trophic changes in their muscular walls, enlarge or rupture their valves, undergoing very considerable dilatation, wasting and displacement or absorption. In all those cases, in consequence of an imperfect circulation, the periosteal envelope suffers from the effects of impoverishment; so that the osseous tissues of the tibial diaphysis are nourished chiefly through the deep arterial vessels which course through the canals of Havers, rather than those on the periphery.

As a result of these pathological changes, the integrity of the bone suffers serious impairment. It becomes fragile, and susceptible to injuries, which may pursue a chronic course; the shaft is more readily fractured, and is never again capable of perfect repair.

It is clearly apparent, then, the age and the previous condition of the parts at the seat of injury, must always, in a very large degree, determine the ultimate, definite results in every case of severe contusion of the soft parts, or the bone, with or without a laceration, in the vicinity of the tarsal ends of the tibia and fibula. The extent of sudden and great compression force which the skin can sustain without being wholly destroyed, or without the fracture of bone, and which it may wholly recover from, is astonishing. Many cases of this description have come under my observation. It was not until it had been proven, on the trial in courts of justice, and I had examined several well attested cases, that I could convince myself that it was possible for the wheel of a railway street-car to roll over the leg without inevitably affecting its complete destruction at the location of injury. Certainly, the rate of speed and weight of the car, whether empty, or heavily loaded with passengers, will make a difference in the the quality and extent of injury.

Lesions of the Soft Parts Overlying the Tibia-Tarsal Articulation Associated with Dislocation, or Fracture, or Both.—The force necessary to sunder the tendino-ligamentous junction at the ankle, sufficiently to separate the head of the astragalus from the articular ends of the tibia and fibula, at the same time opening widely the joint, with or without fracture, almost invariably causes such complete disorganization of the blood-vessels and nerve-trunks as to render amputation imperative. Such an injury always results from direct force, expending its energy on unlimited area. In this class of cases, the shock to the system is always well marked, and even though complete reduction is possible, a painful, palsied, or anchylosed joint remains. A complete, compound-displacement or dislocation of the head of the astragalus, out of the tibio-fibula mortice, I have never seen, nor can I find such a case on record, except in injuries mortal to the joint structures.

A visible, tangible, partial dislocation or luxation, either forwards, backwards, laterally, anterio- or posterio-lateral at the ankle-joint, is very rarely witnessed, without fracture of the diaphysis of the fibula and a diastasis of the apophysis of the tibia; in other words, the actual condition commonly encountered is a *fracture-dislocation*, the morbid anatomy of which is limited to physical disorganization of the bones, with a displacement of their articular surfaces, attended with hæmorrhage, laceration of the soft parts, and a condition favorable for the advent of inflammatory changes.

This brings us to a consideration of what is now-a-days commonly designated Pott's, or Dupuytren's fracture of the fibula. As this lesion derives its greatest interest and importance from the distortion or dislocation, which leads often to ultimate impediment in movement, this feature deserves special attention.

Pott's Fracture; Dupuytren's Fracture; Fracture and Dislocation of the Tibia and Fibula.—The lesion of the above designations, which is limited to the ankle-joint when the typical form is present, must always be regarded as a very grave injury; for, notwithstanding what may be said to the contrary by contemporaneous writers, our most improved methods of modern surgical treatment have rendered us little, if any, aid in obviating the diminished strength, joint action and deformity, which, with the patient in the hands of the most experienced, may occasionally follow. In many respects this injury resembles a Colles' fracture, a condition which, in spite of the almost endless varieties of apparatus devised for its treatment, has thus far defied surgical art, leaving the patient with a crippled or deformed hand in a certain number of cases.

Both are fracture-dislocations, occurring always, with very rare exceptions, in adult life, and in consequence of indirect violence. Like Colles', the typical injury in Pott's fracture is not so much confined to the bone elements as to the soft parts, the synovial membrane, the vessels, nerves and tendons. The ideal aggravated tibio-tarsal dislocation, accompanied with a diastasis or fracture, happily is not common, like the radio-ulno fracture dislocation. In a statistical table of all the fractures treated in the Harlem Hospital interne service, which has been very kindly prepared for me by Dr. George D. Kahlo, the present house-surgeon, it will be seen that in 1,044 fractures of all kinds, there are but forty-four, set down as Pott's. About two-thirds of them came under my care; and, I may say, that among those there were none, not a single one, which did not yield to simple treatment and quit the service—when they remained with us during their entire course of treatment—with fairly useful joints, and little, if any, appreciable deformity. We have been fortunate. The arthritic lesions were not of a serious character, or our results would have been different.

Many of these cases, here tabulated occurring in my service, were not examined by me, as they were splinted and adjusted when I saw them; and hence, it is probable that there were several of them diagnosed by the *internes* as Pott's which were wanting, in all the essentials which go to make up that fracture. In no other way can I account for the discrepancy between our figures and Malgaigne's tables. He collected 160 cases, and found that they constituted but three per cent. of all fractures which entered his service. He saw no case in patients under fifteen years of age, and but two in patients over seventy years. In Dupuytren's 207 collected cases, two per cent. of all fractures were of this form and of these, ten per cent. occurred in females. Seventh-tenths occurred on the right side, and nearly two-thirds were met with in the winter season. This author maintained that fracture of the fibula was always consecutive to that of the internal malleolus.

Malgaigne (1) fixed the heel of the cadaver in a vice and made forcible adduction, when he found that the internal malleolus fractured first, the fibula fracturing consecutively. He then reversed the experiment, using the foot as a lever, and making forcible abduction the same sequence followed. On the contrary, Maissoneuvre, (2) repeating the same experiment, employing abduction, completely ruptured the internal lateral ligament, without always fracturing either malleoli; though when this occurred the force applied spent itself on the tibio-fibular ligament, and diastasis at the tibio-fibula articulation followed, permitting of a twisting, rotary motion and fracture of the fibula some distance from the joint.

Stimpson's (3) experiments on the cadaver seem to bear out Maissoneuvre's observations, for he says: "It will be seen that by fixing the leg and forcing the toes outward, while the ankle is held at right angles, the first to yield, is the exterior tibio-fibular ligament, then the anterior fibres of the internal lateral ligament, and almost coincidently the fibula breaks by the twisting of its lower end," etc. This author claims that the same sequence occurs clinically.

The incongruous results of the experiments of these distinguished authors are hard to reconcile, though it is quite obvious that the subjects experimented on were of different ages, or that there was a difference in the quality of force employed. In any event, deductions arrived at from experimental work on the bone of the dead body, possesses at best but a relative

1 Malgaigne: "Elementes de Chirurgie," Frac. and les Disloc., p. 307.

2 Maissoneuvre: "Fracture du Perone," etc., p. 172.

3 "Pott's Fracture at the Ankle," Mass. Med. Soc., June, 1892.

value and can under no circumstances be regarded as definite and conclusive.

Such are the theories as to causation from an experimental stand-point; but, as we are dealing with lesions on the living being, it may be well to stop for a moment and review the influences which bring about the so called fracture of Pott, during life. The first influences, which we must not lose sight of, are those innate to the bones themselves. This fracture is scarcely ever seen until the processes of ossification are complete. The premature ossification of the bone, or a preponderance of compact non-vascular tissue, may favor a morbid brittleness, so that a wrench or twist produces here what is known by the French as fracture *par arrachment;* whereas, otherwise, nothing but a severe sprain would follow.

Varieties of fracture—Dislocation of the Ankle Joint.—It has been seen then that it is only when the extent of dislocation is considerable, the displacement and laceration of nerve, tendon and ligament extensive and that a double fracture has occurred, that there is present a condition of a very serious character. But there are many intermediate phases of this injury, in which the degree of destruction, or derangement of one structure, is much in excess of another; for it is as absurd as it is erroneous to assume that every case of tibio-fibular diastasis, or apophyseal separation of the tibial flange, with or without fracture of the fibula, is a grave injury, demanding special and protracted care. In those cases in which the extent of separation of the broken internal malleolus and the degree of regular deformity is not great, reposition and retention are attended with no difficulty. When the head of the astragalus has sprung back into its socket and thereby maintains perfect extension, the interosseous-membrane aids in fibular fixation; so that, no matter how oblique the fibular fracture may be, its coaptation and solid union are readily effected.

In a severer form of Pott's fracture, intra-articular hæmorrhage, cellulitis or synovial inflammation are complications which may greatly retard recovery, or terminate in an inflammatory infiltrate of osseous or other cellular deposit; which, external to the articulation, may cause an undue pressure on the neural cords on their way to the foot; a muscular or tendinous anchylosis; or an undue pressure on the blood-vessels. In another, the most serious and unmanageable of all phases of fracture-dislocation at the ankle, along with a double fracture, the dense, broad, internal lateral ligament is completely torn in two, on the same line as the tibial apophysis is snapped off. By this rupture the equilibrium of the joint is lost; the foot, fixed with the weight of the body concentrated on the horizontal articular surface of the tibia, which has now lost its moorings, now turns on its own axis, and, in this twisting motion, sunders the tibio-fibular union; the same spiral motion ascending splits the fibula shaft in its most brittle and exposed part. The head of the astragalus having left its mortice, may occupy various relations with the articular surface of the tibia. Now the powerful and unopposed muscles of the leg, acting on the foot, through spasmodic contraction cause great displacements, tear widely open the capsule, and cause a great derangement, contusion and laceration of the vascular and neural elements lying in close relation to the joint.

Subsequent inflammation from this violent sundering of a powerful joint is inevitable. It would be quite inconceivable that after treatment of any description, anything like perfect functional restoration after an injury of this description were possible. And such is the case. The swollen sensitive joint can be retained with safety, by resort to pressure or traction sufficiently long to complete repair; but admitting this, by the time the adjustment could be removed, we should have solid, fibrous or osseous anchylosis.

This latter type, then, and this only, is that which Percival Pott so fully and clearly described, and is the only fracture at the ankle which should bear his name.

Diagnosis.—When there is a difference of opinion as to the precise morbid structural changes which constitute a certain specific lesion, it is clear that a definite diagnosis of it is attended with many difficulties. This is particularly the case with apophyseal fractures. It was most unfortunate that this injury ever was designated *Pott's* fracture, for the theory of causation as described by the English surgeon, and the principles of treatment formulated by him, were disputed by Dupuytren, and have in a large part recently been ignored by Stimpson. This wide divergence of opinion on cardinal features would imply that it was not quite the

same lesion on which each made his observation. It would greatly aid then in diagnosis if this so-called Pott's fracture were simply designated "fracture dislocation" at the ankle joint, when we find luxation or sub-luxation coincidently with fracture. From the same precise physical phenomena as obtain in Pott's, we may have a fracture with or without displacement of the internal or the external condyle. I have seen a considerable number of these cases, in winter seasons, when the patient will tell us that he stepped on a cinder or cobble-stone and "turned his ankle." In these cases the internal or the external lateral-ligament has given way, often permitting a rolling inward or outward of the head of the astragalus, with an inversion or eversion of the part, thus constituting another type of fracture-dislocation.

When there is complete separation and mobility, these fractures may be readily detected without difficulty at the first examination. If there be no displacement, then, unless the muscles are well relaxed and considerable force is employed, crepitus is absent, and the presence of a fracture must often remain in doubt; then, I hold, the employment of an anæsthetic with violent manipulation must be condemned.

One should always hesitate in cases of fracture dislocation at the ankle, when a break in the bones is unquestioned, to at once stamp it a Pott's fracture, for the profession, as a whole, have an exaggerated notion of the seriousness of this lesion; and, as has been pointed out, it is only in those cases attended with marked irreducible dislocation and extensive damage to the arthritic structure, that this designation is at all applicable.

Treatment of Sprains, Contusions and Fracture-dislocations at the Ankle-Joint.—The treatment of sprains and contusions may be studied together, for the same line of treatment dominates in both when neither is attended with laceration of the skin. Our measures should vary according to the different phases of pathological changes presenting. If called immediately after injury, the end will generally be met by applying such a therapy as will relieve pain and give the patient comfort. Our efforts should also be directed energetically with a view of preventing the development of inflammation. The limb should be placed in an elevated position, well supported, the use or disuse of the bandage depending on the manner in which it is tolerated. In most cases, applied early, before the supervention of inflammation, it is of infinite value, to relieve the arterial throb, overcome muscular spasm, and steady the joint. If there be very much pain, with or without tumefaction, and there is sanguineous effusion into the capsule or soft parts, then the free application of leeches and local depletion is a powerful prophylactic against pain and subsequent inflammation. Bathing, either cold or warm, rubifacients or counter-irritants, will be required in many, and serve a useful purpose.

One of the most important questions of late years in the surgical treatment of severe joint contusions and sprains has been with reference to immobilizing the limb—giving it rest, as it is said. Immobilizing a sprained ankle-joint by plaster-of-paris, as a conventional method, is a practice which cannot be too strongly condemned. It is true that the injured part needs temporary rest, but physiological rest must not be confounded with immobilization. The joint may be amply supported by the simplest sort of ordinary splinting, which will permit of ready removal, moderate motion, massage, application of medicaments to the bandage, and other measures. But, with the knee flexed and the sural muscles relaxed, a well-padded bandage applied, and the limb swung or supported, any sort of splinting is very often unnecessary. Since, then, any sort of permanent fixation is so liable to be followed by anchylosis, we must be on the alert for this unfortunate sequela, and in the general run of cases, if it supervene, we are responsible for it.

It is surprising with what rapidity degenerative changes set in in contiguous parts after joint injury, when all joint motion is completely arrested. There is in the child an immediate cessation of growth, and in the adult so profoundly are the nutritive processes affected, that atrophic and degenerative changes pursue a swift and destructive course, so that, after the lapse of but a few weeks, all hope of restoration of normal joint-action is forever destroyed. Passive motion, then, should be contemporaneous with other measures. When, owing to the severe and unbearable pain which this may give rise to, it cannot be practicedf then we may be assured that the brunt o, injury has been borne rather by the bone

than the soft parts, and that pathological changes are advancing in the bone element, which we can only modify or arrest, by bold and prompt antiphlogistic procedures.

It is obvious, then, that in severe ankle-joint concussions or twists we must treat them with promptness, energy and patience, avoiding above all things protracted immobilization; and with the child, in whom arrest of growth in the affected limb means crippling for life, employ no device which might seriously interfere with nutritive processes. Should anchylosis, however, follow our treatment, or be present when we are called to attend the case, let us be assured that it is a stiffening and joint distraint, arising entirely from positive molecular organic changes, before we decide that it is beyond relief and are content with the let-alone policy. I have seen quite a number which have been entirely cured of their lameness, more than a year after their injuries, by thoroughly breaking up the adhesions in and about the joint. Of course, it is needless to say that before one will undertake to break up an anchylosis, he must very carefully examine the bones and test the muscles, or he will, in unfit cases, surely fracture the shaft, as I did myself in two patients, in my very early experience. In both cases the bones were more fragile, through pathological changes, than were the adhesions.

The management of Pott's fracture, by those best known to the profession as authors of treatises on fractures, has been on most divergent lines. Dupuytren and Hamilton bound the foot and leg to an internal splint, with the foot markedly abducted, the several muscles being relaxed by the bending of the knee. Pott himself said little about splints, but attached great importance to posture. Speaking about this, he said: "The limb should be laid on its outside, with the knee moderately bent; by this the muscles forming the calf, and those tendons which pass behind the fibula and under the os-calcis, are all put in a state of non-resistance, when all trouble and difficulties will vanish immediately. The foot being easily placed right, the joint reduced, and by maintaining the same disposition of the limb, everything in general will succeed very happily. as I have often experienced."

The more modern plan of fixing the fragments and the joint is by splinting material applied about the joint, the limb extended and resting on its dorsal aspect. Such is the plan recently recommended by Prof. Stimpson. But let us not forget, that we are something more than moving automatons, and in dealing with this species of injury, we should as in any other, treat it on sound surgical principles, regardless of the individual preferences of different surgeons. Let us appreciate the fact that we have a fracture opening into a joint, with more or less displacement of the articular surface. When the tibial head is driven far forward and torn through its capsule, the anterior and annular ligaments, there are no means known to science by which we can give our man a new set of ligaments; and hence this dislocation, as others which we occasionally see, may be entirely irreducible, or, if reducible, it cannot be retained, without dangerous pressure, or anchylosis. When the head of the astragalus is anterior, and the tibial surface posterior and below it, extensive, ligamentous laceration or overstretching is inevitable. Decided lateral luxation entails, also, either rupture of the ligament, or else it has given way only by a tearing off at its osseous surface of attachment, even carrying some of the bone substance with it. It is clearly apparent, then, that as this element of dislocation in aggravated cases predominates, its efficient reduction and retention are what should particularly concern us. For the efficient accomplishment of this purpose postural treatment occupies preeminently the front rank. Muscular relaxation, topical applications, the bandage with appropriate supports, will, as Pott has well said, suffice in most cases. It must not be overlooked, however, that when joint disorganization has been very considerable, and active inflammation follows, defective joint action with deformity can, in no way, be wholly obviated.

Whatever line of mechanical treatment may be instituted, it is well to know that this has its limitations, and, if misdirected or too protracted, may conduce to a pathological condition and make the joint and foot more serious than if nothing whatever had been done. The trophic changes, wasting, and loss of function which invariably follows, in varying degrees, traumatic or pathological joint lesions and fractures, are clearly and concisely described in a classical production recently presented before the American Orthopædic Association by Prof. Roswell Park ("A Study of Atrophy," *Gaillard's Medical*

Journal, October, 1892). The conclusions in this brochure, derived from the experimental and clinical observations of French, German, English and American surgeons, are remarkable and valuable for the general accord with which all agree:—that an injury to the shaft of a bone, or to any of the joint structures, an arthritis or osteo-arthritis, which causes protracted inaction or long-continued immobilization, invariably induce an arrest of growth, degeneration of bone-substance, muscular wasting, with impaired or entire loss of function in the affected limb. Therefore, in traumatic osteo-arthritic lesions, in fracture-dislocations at the tibio-tarsal articulation, as in a Colles' fracture or a fracture opening into the elbow-joint, the greatest caution should always be observed in severe cases, to remove every sort of fixation apparatus, at the earliest possible date; with a view of commencing passive exercise, and thereby preventing organic changes in the structural elements of the bone and muscles, which might lead to temporary or permanent muscular or arthritic anchylosis attended with a low grade of synovitis and a bloated, œdematous phase of cellulitis.

For the purpose, then, of maintaining the normal nutrition of the joint, and obviating, as far as possible, subsequent impediment in motion and diminution in strength, massage, friction, uniform but interrupted pressure, early and constant, are important and vital accessories. The precise time at which digital manipulation and ankle motion should commence will depend, in a certain measure, on local conditions. If there has been an extensive rupture of ligament and tendon, any disturbance of adjustment-pressure is immediately followed by a subluxation; then immobilization must be continuously maintained over a considerable period of time, though at the expense, perhaps, of an anchylosed joint. But this condition is exceptional. In those cases in which the chief lesion is osseous, the propriety of disturbing the fragments by early handling of the foot might be questioned, as such interference might seem to retard union, or render it less effective.

My experience, however, in the treatment of fractures in general, as well as those here considered, has been that the changing of dressings, moderate kneading of the muscles, with slight motion of the fragments, seems rather, on the contrary, to stimulate processes of repair and accelerate osseous fusion. Fortunately, in any event, in these ankle-lesions, in which after the most judicious treatment the range of motion is restricted or is entirely lost, still, with a stiff joint the limb often remains firm and useful, a thousand-fold more so, than any artificial substitute can ever render it. In those extreme cases, in which, through tibio-fibular diastasis and ligament rupture, there has been an irreducible axial rotation of the head of the tibia on the articulating surface, with pronounced posterior or lateral displacement, a weakened, crippled joint remains, which necessitates in locomotion the comfortable adjustment of some sort of prothetic appliance, which will give ample support, and, perhaps, prevent pain, on motion of the limb.

My practice is never to undertake to liberate a joint with any anæsthetic. The two accidents cited happened while my patients were under ether. While, on the contrary, in every instance in which I have been able to open the surfaces, by a sudden but cautious motion, without ether, the results have been permanent and good. In my judgment, it is much better, in genuine, osseous anchylosis, to divide some of the tendons and open the joint if necessary, if otherwise the application of great force is rendered necessary.

FRACTURES OF FIBULA AND POTT'S FRACTURE.

Diagnosis	Male.	Female.	Cured.	Improved	Unimproved.	Cured.	Discharged.	Transferred.
Fibulæ:								
Simple	22	2	14	10	.....	.....	13	11
Compound	2	.....	2	.....	.....	.....	2	.....
Comminuted	1	.....	1	.....	.....	.....	1	.....
Pott's:			.....					
Simple	36	11	35	12	.....	.....	32	15
Compound	2	.....	2	.....	.....	.....	2	.....
Total	63	13	54	22	.....	.....	50	26

Actual number of deaths from fractures, including traumatic amputations, etc., 117, showing a mortality of 9.4 per cent. of cases treated.

Ratio of cases cured is 70 per cent., which is exclusive of those transferred as improved and unimproved immediately or shortly following the time of receiving the injury.

RESUME.

POTT'S FRACTURE.

Number occurring in the male	38
Number occurring in the female	11—49
Of the right leg	16
Of the left leg	15
Leg undesignated	18—49

Summary of Ages.

Yrs.	No.	Yrs.	No.	Yrs.	No.
Under 20...	1	30–40...	15	50–60...	4
20–30...	16	40–50...	11	Over 60....	2

Months of Year Occurring.

Jan..... 6	April..... 2	July... 3	Oct ... 4
Feb..... 5	May..... 4	Aug.... 3	Nov... 4
March.. 5	June..... 2	Sept.... 4	Dec... 6

Summary as to Seasons.

Spring, 11 Summer, 8 Autumn, 13 Winter, 17

Percentage.

Percentage of Potts' fractures to total number of fractures treated, exclusive of those of metatarsus, phalanges, etc., 4.009 per cent.

FRACTURES OF FIBULA.

Number occurring in the male..... 25
Number occurring in the female..... 2—27

Of the right leg..... 10
Of the left leg..... 9
Leg undesignated..... 8—27

Summary of Ages.

Yrs.	No.	Yrs.	No.	Yrs.	No.
Under 20...	2	30–40...	9	50–60...	2
20–30...	9	40–50...	4	Over 60...	1

Months of Year Occurring.

Jan..... 5	April..... 3	July..... 7	Oct..... 1
Feb..... 1	May..... 3	Aug 1	Nov..... 2
March.... 1	June..... 0	Sept..... 2	Dec..... 1

Summary as to Seasons.

Spring, 7 Summer, 8 Autumn, 5 Winter, 7

REPORT OF FRACTURES TREATED AT HARLEM HOSPITAL

Exclusive of Phalanges, Metacarpus and Metatarsus, Carpus and Tarsus), from January 1, 1887, to September 1, 1892.

Diagnosis.	Male.	Female.	Cured.	Improved.	Unimproved.	Died.	Discharged.	Transferred.	Complications and Remarks.
Skull Simple	19	...	12	1	3	3	15	...	[compl., 1; operation, 2.
Compound	33	5	29	2	6	6	27	...	Of base, 3; radius, 1; clavicle, comp.
Compound depressed	42	3	27	2	14	15	29	...	Operation in 39 cases.
Com'p'd depr'd and multiple	1	1	1	...	1	1	1	...	Of base, 1 case; operations, 2.
Com., compl., commi., depressed	1	...	...	...	1	1	...	...	Gunshot wound.
Simple multiple	1	...	...	...	1	1	...	...	
Simple depressed	...	3	2	...	1	1	2	...	
Of base	38	10	5	1	34	42	5	1	
Nasal bones: Simple	4	...	4	...	...	...	4	...	
Compound	6	1	7	...	...	...	7	...	
Zigomatic process: Simple	1	...	1	...	...	...	1	...	
Superior maxilla: Simple	11	1	11	...	1	1	10	1	Death from other injuries.
Compound	2	...	2	...	...	...	2	...	[of skull.
Compound complicated	1	...	...	...	1	1	...	...	Also comp., compl., commi't'd fracture
Inferior maxilla: Simple	24	2	22	1	3	3	22	1	Other injuries complicating, 3.
Compound	15	...	13	1	1	1	12	...	Other injuries complicating, 1.
Malar	1	...	1	...	...	...	1	...	
Vertebræ	21	3	2	1	13	19	3	2	
Ribs: Simple	82	9	52	31	5	3	50	38	Other injuries complicating, 3.
Compound	6	1	6	...	1	1	6	...	Other injuries complicating, 1.
Multiple	4	1	5	...	...	...	5	...	
Complicated	15	...	3	...	12	12	3	...	
Pelvis: Ilium	15	...	13	1	1	1	13	1	
Pubes	4	...	1	...	3	3	1	...	
Sternum: Complicated	1	...	...	...	1	1	...	...	
Clavicle: Simple	65	7	60	10	2	2	59	11	Other injuries complicating, 2.
Compound complicated	1	...	...	...	1	1	...	...	
Scapula: Body	25	4	23	3	2	2	23	4	Other injuries complicating, 2.
Coracoid process	1	...	1	...	...	...	1	...	
Acromion process	6	...	6	...	...	...	5	1	
Humerus: Simple	50	13	52	6	5	5	51	7	Other injuries complicating, 5.
Compound	15	4	14	...	5	6	13	...	Other injuries complicating, 2.
Internal complications	1	1	11	...	...	...	11	...	
Comp., compl., and commi'd	...	11	11	...	...	...	11	...	
Radius: Simple	82	21	91	7	12	11	85	7	Other injuries complicating, 11.
Compound	9	1	7	2	1	1	7	2	Other injuries complicating, 1.
Greenstick	1	1	2	...	...	...	2	...	
Ulna: Simple	27	5	30	1	1	1	30	1	Other injuries complicating, 1.
Compound	5	1	5	...	1	1	4	1	Also fracture of skull, 1.
Olecranon process: Simple	5	1	5	...	1	1	5	...	Fracture of skull, 1.
Compound	2	1	2	...	1	1	2	...	Died from senility and other injuries.
Radius and ulna: Simple	16	5	19	...	2	2	19	...	Other injuries complicating, 2.
Compound	7	6	6	...	3	3	6	...	Other injuries complicating, 2.
Comp., Compl. and commi'd	1	3	3	1	...	...	3	1	
Femur: Simple	49	19	46	12	10	9	47	12	Other injuries complicating, 8.
Compound	10	...	5	...	5	5	5	...	Other injuries complicating, 2.
Multiple	2	...	1	...	1	1	1	...	Other injuries complicating, 1.
Trochanter major	2	...	2	...	...	...	2	...	
Intra-capsule	9	8	6	11	...	...	6	11	
Patellæ: Simple	12	3	12	2	1	1	13	1	Other injuries complicating, 1.
Compound	3	...	3	...	...	...	3	...	
Tibia: Simple	57	8	43	20	2	2	40	23	Other injuries complicating, 2.
Compound	36	2	24	12	2	2	25	11	Other injuries complicating, 2.
Fibula: Simple	43	11	43	11	...	..	34	20	
Comminuted	4	...	3	1	...	...	3	1	
Compound	13	2	11	...	4	4	11	....	Other injuries complicating, 4.
Pott's: Simple	42	5	35	12	...	...	32	15	
Compound	2	...	2	...	...	...	2	....	
Tibia and Fibula: Simple	48	12	29	28	3	3	29	28	Other injuries complicating, 3.
Compound	48	6	29	13	12	12	29	13	Other injuries complicating, 7.
Total	1045	197	871	193	178	190	838	214	

EXPERIENCES IN PELVIC SURGERY.*

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Of all the surgical problems difficult to solve it may be truthfully said that those met within the pelvis are the most trying. I know of no surgical work which can compare with the experiences found in the pelvis; such a diversity of conditions, complications and unexpected happenings are ever presenting.

In a series of many operations but few will be alike in every particular. Uncertainty of making an absolutely correct diagnosis before operation enters largely into the experience of all operators in this field.

When I had a little experience in this work I could always make a diagnosis and quite frequently verify it after operation. With an increasing experience, I find myself well satisfied with an approximate diagnosis.

The diagnoses of the pus cases are usually clear, and one makes a correct diagnosis in the majority of cases. It is in the other pelvic conditions where we make our errors of diagnosis. We might very properly state that only those without operative experience, or the theorists, always make a correct analysis of their cases. Individually, I frankly admit my inability to correctly diagnose the character of abdominal and pelvic troubles increases as my experience becomes larger. I have diagnosed pus tubes and found extra-uterine pregnancy; diagnosed extra-uterine pregnancy and found pus; diagnosed ovarian lesions and found the trouble located in the tubes and *vice versa*.

This experience tallies with that of all the most prominent workers in this domain of surgery with whom I have conversed.

The bad results in pelvic work are frequently found to be the result of neglect, often of ignorance, and very frequently of a want of resolution in the attendant. An early use of the knife in many cases which eventually pass into our hands would have given far more brilliant results, and improved generally the present statistics in pelvic surgery. The number of cases we see in the early stages of disease are relatively few; by far the greater number are in a late stage of disease, and not a few on the verge of dissolution.

The criticism passed upon pelvic surgeons, that they often operate when operative proceedings are unnecessary is usually unjust, and simply the gratuitous statement, actuated by bad motives, of those without personal experience. No conscientious, earnest surgeon has a thought but for the best interest of those placed under his charge.

When well defined pelvic lesions exist nothing short of radical measures succeed. Abortive attempts at dealing with pus or other threatening conditions only bring disastrous results. I am a believer in the conservatism so well defined by McMurtry in a recent paper, and I heartily recommend the perusal of that erudite article to the critics who never operate.

That needless, reckless surgical procedures are perpetrated in the pelvic work of a few we will not attempt to deny; however, the same is true in other directions, particularly so in the cerebro-spinal surgery which recently threatened to become epidemic.

The routine gynecologists are largely responsible for much of our work. By a routine gynecologist, I refer to the gynecologist who treats all his cases alike. One who introduces a speculum, paints the cervix with iodine, makes local applications to the cervical canal or within the uterus itself, insufflates some boracic acid, introduces a glycerine tampon or pessary and requests the patient to come again in two days. This soft impeachment cannot be denied.

The specialist should recognize conditions imperatively demanding operative interference and not nurse cases along in the described manner until they become "wrecks"—wretched examples of what electricity, the sound, dilator and cautery can do for women.

What I have said in these paragraphs does not apply to all specialists in women's diseases, but, unfortunately for the other sex, it does apply to the majority. Much of my work comes to me after all the

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methods of minor "gynecological tinkerings" have been exhausted. The most difficult "pus" operations I have performed have followed prolonged treatment at the hands of gynecologists, or better, the pseudo-gynecologists. An example of the character of the cases one meets with after meddlesome manipulations with the sound will be *apropos*:

Mrs. C., suffering with dysmenorrhœa of some severity, was recommended to a local specialist who told her "that the mouth of the womb was closed up" and it would be necessary to dilate it at once, which operation he immediately set about to perform. A uterine sound was introduced. This caused no little pain, but she was assured that was to be expected. At midnight her attendant was summoned in haste to see his patient suffering excruciatingly. A high temperature and great abdominal tenderness were present, and then for six weeks, a severe form of peritonitis was combated. As a result of the opium treatment of the peritonitis the patient became addicted to morphine; was treated by various local neurologists and wound up in Philadelphia where she was temporarily cured of the habit by Dr. Mitchell. While in the East she was examined by our distinguished friend, Dr. Barton Cook Hirst, who advised operation for well marked tubular disease and abscess of the ovaries. The case was referred to me for operation after her return, St. Louis being her home. Operation revealed universal adhesions, multiple pelvic abscesses, ovaries and tubes containing several ounces of pus. The adhesions were dense and the most difficult to deal with that I have ever met. The serous coat of the neighboring intestine was stripped off in many places in the process of enucleation. After a free flushing, a tube was introduced and my troubles began. The morphia mania returned, the patient became uncontrollable and insisted on having morphine whenever she desired, in spite of earnest entreaty. From then on she took full charge of her case and the nurses were unable to manage her. The tube began to discharge fecal matter on the third night after the operation and continued to do so for seventeen days, when it suddenly ceased, the stercoracious fistula closing rapidly.

I might detail other cases which have come under my observation demanding operative interference where the inflammatory conditions were the result of the introduction of the sound, caustics, etc.

But a few weeks since, it was necessary to operate in an emergency on a leaky pus tube which had its origin in a like manner. The original tubal disease had been treated with an intra-uterine grooved stem pessary, the idea of the attendant being that drainage *per viam naturales* would follow. Vaginal incision is a favorite method of treatment of pelvic pathological collections with some. In my experience but few, if any, of these cases can be considered properly or perfectly cured by such means.

We find multiple abscesses in the largest proportion of cases which cannot be drained by efforts so blindly and indirectly made. The abscesses may or may not communicate with one another and usually but one such abscess would be drained by a single vaginal incision. To illustrate: An intelligent practitioner recently requested me to see his wife who had been having recurrent attacks of peritonitis. She had undergone a vaginal incision eighteen months before her present attack of peritonitis. Was relieved for a few months, but latterly had been losing ground on account of numerous attacks of peritonitis. I found the pelvis choked up with inflammatory masses, a fixed uterus, and at site of the old incision, a soft bulging point in the otherwise board-like vaginal vault. Her husband wished me to open the threatening abscess, which I refused to do as a matter of principle. The abdomen was distended with signs of an aggressive peritonitis present. A temperature of 103° and over had existed for two weeks prior to my visit. I suggested a section which was not agreed to. A few days later I was summoned in haste. All the symptoms had become aggravated and her condition, indeed, alarming. Consent was given to an operation. The peritoneum was thickened, omentum agglutinated in every direction, matted intestines, a pint of pus in the pelvis, multiple abscesses surrounding the uterus on all sides. An abscess the size of an egg isolated from the other pus collections proved to be the one pointing into the vagina. The abdomen was flushed, tubes inserted and my late evening visit found a normal temperature. Recovery from that time on was uneventful. Had I been persuaded to

make the vaginal incision, the register would have "rung up" another surgical failure.

An experience in extra-uterine pregnancy forces upon me the wisdom of Tait's law of exploratory incisions in obscure diseases of the pelvis and abdomen. The force of his arguments cannot but grow in favor and importance in the estimation of any one with surgical instincts who desires to do what is best for his patient.

The one condition above all others where exploratory incision should be adopted is in cases of suspected extra-uterine pregnancy. It is correct and good surgery to open the abdomen and not wait for all the classical signs to appear. They may come it is true, and your patient may be lost by procrastination. It may not meet with the kind accord of this body of distinguished specialists, but it is my belief that in all cases of suspected extra-uterine pregnancy it is best to do an exploratory operation—a short clean incision. If nothing is found you have at least relieved your mind of anxiety born of the fearful experience such cases can only give. What surgeon hesitates to operate in accessible aneurisms? Yet in extra-uterine pregnancy, do we not have a condition equally as bad? The text-books advise that electricity and other measures be tried first and operative procedures later. The results of such teaching, we read of in the mortuary columns of the daily press. The symptoms of extra-uterine pregnancy are so frequently obscure and unreliable that I am firmly convinced that the radical position taken is correct.

An example of an unusual history in a case of extra-uterine pregnancy is now under my care. Operated upon three weeks ago. Mrs. T., æt. twenty-eight, the mother of four children; desirous of no further increase in her family, having missed one period, on advice of a neighbor took repeatedly large doses of oil of tansy; was seized with flooding and supposed she had aborted. Hæmorrhage became profuse. After several days called in a physician. "Had some fever and slight chills." The discharge was offensive, the womb curetted with a blunt curette and a few clots removed. Fever did not abate but rapidly rose; great tenderness and symptoms of peritonitis rapidly developed. Was seen by me the night of the eleventh day. Temperature 105°; surroundings were bad and patient was sent to the hospital at once. Operation early the following morning. Appearance of patient peculiarly bad, pulse weak. Section, abdomen filled with blood, extra-uterine pregnancy right side. Patient's condition on the table alarming, —almost pulseless when abdomen was opened, Tubes rapidly enucleated and tied off; free saline irrigation; drainage tube placed in position; usual treatment of impending collapse instituted. Reaction very gradual, but followed by complete recovery. Temperature never reached above 101°, normal after the first week.

My faith in the dorsal position, short incisions, drainage in nearly every case and free use of hot water, remains, and I do not see the advantage, if any, of a departure from such technique.

SHOCK.*

By JAMES EVANS, M. D.,
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In the severe injuries inflicted on the body by accident and the major operations of surgery, not the least element of danger to life is the condition known as shock, which rapidly supervenes. The torn and lacerated tissues may involve only a small area, the hæmorrhage may be inconsiderable in amount, or the limb which has been crushed may under other circumstances be removed without any great menace to the life of the individual, yet the shock may be so profound and persistent as to resist all efforts to avert death. The degree of shock is not determined solely by the extent and gravity of the physical injury. Certain idiosyncrasies of constitution, the character of the force which inflicted the injury, and the circumstances under which it occurred, are potent factors in its determination. Individuals of a highly wrought and exquisitely sensitive nervous organization bear pain with far less fortitude, and are more susceptible to shock than those of dull and obtuse intellects and blunted sensibilities. If the agent which has caused the injury has vividly impressed the mind with its great power, and that it is capable of exerting a force irresistible and crushing in its character, the shock is always pro-

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nounced. A shell-wound is usually attended by more shock than one from a ball, although there may be no greater destruction of tissue. A similar reason may be assigned for the severity of shock in railroad accidents, and the injuries inflicted by powerful machinery. It is evident, therefore, that the physical injuries are not the only cause of that assemblage of symptoms which is designated *shock*.

The prime factor in its production is the impression made on the mind by the perception of the threatened danger, and the serious consequences which may follow whatever wounds may be inflicted. The condition is not originated by, but precedes the infliction of the injury. The irritation of the nerves of sensation at the point of injury is propagated to the central nervous system, and there likewise originate impulses which being transmitted to the medulla start into action the same reflexes, and the state is thus indefinitely intensified and maintained. Fear is capable of producing such a profound degree of shock as sometimes to cause speedy death, and this result frequently takes place even before an inevitably fatal injury is felt. Even in cases in which the body has sustained no injury the effect is so pronounced and persistent as to cause serious illness, which may continue for many days thereafter. This phase of it is well illustrated in an incident which occurred in the neighboring town of Cheraw.

In laying the foundation of a bridge across the Pee Dee River at that place, an immense block of granite weighing over a ton was being lowered into a pit forty-four feet in depth; at the bottom was a man who was to direct it into the proper position. When this huge block of stone was suspended over the pit the cable holding it began to slip and the man below was warned to crouch in a corner, as it would inevitably fall. The rock did fall, and the man in the pit miraculously escaped without injury, but he was taken out in a perfectly lifeless condition, and was exceedingly ill for more than a week.

Every army surgeon has frequently observed soldiers in approaching the battle-field, when within the sound of a musketry fire, exhibit an uncontrollable desire to evacuate the bladder and bowels. The apprehension of danger, and the uncertainty of the ultimate fate which awaits them, produces irregularity in the action of the heart and respiration, and relaxation of the sphincter muscles, in other words, a mild degree of shock. If wounded just at this time the shock is more pronounced than if it occurs during the heat of an engagement. When engaged fully in action, this feeling of dread soon passes away and is forgotten in the excitement of the battle, and now the severest wounds are received, and shock is deferred for hours, and not experienced until the stage of excitement has passed away. Then it is that the mind takes cognizance of the wound and its gravity, and shock rapidly supervenes. The higher nervous centers being preoccupied have contributed nothing to its production, and at the same time have held in abeyance and controlled the various reflexes, which the irritation of the nerves of sensation at the point of injury have started into activity. Hence shock is deferred. If it were possible to maintain for an indefinite period the mind in this state of control of the reflexes, we should be able to obviate the supervention of shock arising from physical injury.

In the severe injuries sometimes received by men while in a state of profound intoxication from alcohol, the shock is not marked, especially if they are made warm and comfortable, and stimulants are suddenly withdrawn. The effect of alcohol is similar to ether and chloroform,—the nervous centers, from the highest to the lowest, succumb to its influence in the same order of procession. During the state of profound intoxication, consciousness, sensation, and all the reflexes are temporarily held in abeyance, and it is impossible for a nervous impulse originating in any part of the brain, or the irritation of an afferent nerve, to be transmitted to the centers which are instrumental in the production of shock.

In injuries arising from accident, gunshot, and those which occur in the ordinary pursuits of life, it is not in our power to prevent the shock which subsequently follows, but much may be done to relieve it and thereby save life.

The chief indication in the treatment is to relieve promptly the embarrassment to the circulation, and, as this is owing mainly to undue stimulation of the vagi, remedies such as atropia and strychnia which have a sedative or paralyzing effect on these nerves have the happiest effect.

These drugs ought to be administered together hypodermically in doses of one one-hundredth to one one-fiftieth grains, and at the same time external heat applied to maintain the warmth of the body. If the patient can swallow, whiskey or brandy should be given, hot, and but sparingly diluted, in order, as Lauder Brunton says, "to obtain its stimulating reflex action on the heart." The latter can frequently be stimulated into action by firm but intermittent pressure, by the end of the fingers, on the ribs immediately over it. The abdomen should be bandaged with a flannel roller, as it maintains warmth and by its pressure relieves somewhat the plethora of its blood-vessels.

There is much discrepancy of opinion in regard to the administration of morphine hypodermically just before the anæsthetic is given in cases requiring a surgical operation, and when deferred thus late, it is of questionable propriety. But it is of invaluable service not only in mitigating but in preventing in a large measure shock when administered in a proper manner and interval before the contemplated operation. The patient should be prepared and all information of the time of the operation should be withheld from him, and without arousing his suspicions, a hypodermic injection of morphine and atropia given in a sufficient dose to produce sound sleep, and while in this state, the anæsthetic should be cautiously administered so as to bring him completely under its influence without awaking him.

All the phenomena by which shock is manifested are the result of reflex action through the medulla and are caused by impulses originating in the great nervous centers of the brain. Any injury or irritation of the peripheral extremity of an afferent nerve must be propagated to these centers before it can reach the great center of reflex action. To prevent shock therefore, we must endeavor to avoid exciting any thought or emotion which may start these impulses from the great centers to the medulla and give rise to those disturbances which constitute its essence. When a patient undergoes preparation for a surgical operation and is told, even days before, of the time and place, and is borne into a modern operating room with all its paraphernalia of trays and knives, sponges and appliances for rendering a wound aseptic, and sees the preparations being made by surgeon, assistants and nurses, he must have a stout heart and be more than human to view what is taking place around him with stolid indifference and without fear and apprehension as to the final result. Before he receives the usual hypodermic of morphine, or the anæsthetic is administered, he is like the soldier approaching the battle-field, he is already suffering from a more or less mild form of shock. Add to this the stimulating effect on the vagal center of the primary action of the morphine, and if perchance the first cut of the surgeon's knife is made before he is fully under the influence of the anæsthetic, we have an additional inhibitory stimulus which may bring the heart to a standstill and death ensue. Whatever thought or emotion dominates the mind at the moment loss of consciousness occurs from sudden seizure of disease, a traumatism of the brain, or the effect of an anæsthetic, the same thought or emotion on the return of consciousness will still exert a controlling influence, and may give rise to a motor response, or diminish or increase the blood supply to some particular vascular area. If a thought or emotion powerful enough to excite reflex action occupies the mind as it passes under the influence of the anæsthetic, it will reappear in undiminished vigor as soon as intelligence resumes its sway.

On one occasion while conversing with a gentleman of more than ordinary intelligence, a president of a railroad, on a subject in which he was deeply interested, he was suddenly seized with an epileptic convulsion while speaking in the middle of a sentence. The fit was rather a severe one and was followed by coma which continued for twenty hours, and, happening to be sitting by the bed when consciousness returned, he finished the sentence which was interrupted by the fit. Some time ago I was called to see a man in a state of profound coma from a compound, depressed fracture of the right frontal bone near the median line, the wound having been inflicted during a quarrel by a small end of a monkey wrench in the hands of his antagonist. As soon as I trephined and removed a small button of bone which had penetrated the dura, and further had raised the depressed fracture, consciousness returned and the man resumed the quarrel.

Shock is sometimes not very pronounced

from the moment of the injury, yet persists for hours and days before full reaction finally takes place. While the artery at the wrist seems to be full enough it is weak and compressible, and the patient is in a state of somnolence, sleeping most of the time. The impression of the injury on the nervous system is more profound than the early symptoms would seem to indicate, until its recognition is forced upon us by some marked disturbance of nutrition. Apart from the destruction of tissues inflicted by the injury, shock through disturbance of the whole nervous system effects very serious changes in the nutrition of the body, and will cause diseased action in any part from slight irritation, and the skin is especially vulnerable in this respect. The pale and livid hue of the surface of the body is evidence of its nutrition. The blood which nourishes it being propelled by a weak and enfeebled heart flows with diminished velocity through arteries and arterioles of diminished calibre, and cannot convey the requisite amount of nourishment to the various tissues of the body. Hodgekin, as quoted by Erichson many years ago, in 1857, suggested that the condition was due to a chemical poison formed in the wound from innutrition of the injured tissues, and being absorbed into the circulation poisoned the system, in other words, was caused by a ptomaine. The real cause is owing probably to the presence of leucomaines which have been produced in excessive amount from general innutrition of all the tissues of the body from an inadequate supply of nourishment. The impaired vitality and lessened power of resistance of the skin to external irritants is marked and sometimes the death of a skin flap can be attributed solely to this cause. Hence, when a patient has received injuries which render an amputation imperative, and the shock has been persistent, the flap, including some muscle, should be the preferred method, as the small amount of muscle which it includes secures greater vascular supply.

In severe shock the presence of albumin in the urine can usually be detected. In the persistent forms it becomes a serious complication and retards the healing of any wound which may be present, or it may cause the system to succumb to septic influences. Albumin is not the direct result of a wound or injury to the tissues, but arises from the effect of the profound disturbance of the nervous system, which constitutes shock, on the organs chiefly concerned in eliminating effete matters from the body. It was a happy circumstance that the man who was removed from the pit in Cheraw in a helpless condition from shock was examined the previous evening by my friend Dr. Kollock for life insurance, and the urine tested for albumin and none found. A few hours after the accident the urine was again tested and albumin was so abundant as almost to solidify the contents of the tube.

Communications.

THE TREATMENT OF ANAL FISSURE, OR IRRITABLE ULCER OF THE RECTUM.*

By LEWIS H. ADLER, Jr., M. D.

There are some general rules that must always form a part of the treatment of anal fissure, to wit, to lessen as much as possible any inordinate action or distention of the bowel, and to prevent the ulcerated surface being irritated and abraded by the passage of hardened feces.

To fill these indications enemata or mild aperients should be employed, and the diet must be regulated, the use of bland and unirritating food being enjoined.

It is not possible to point out a diet that would be even generally applicable, as so much must depend upon the state of the constitution and the previous habits of the patient; but in general it should be moderate in quantity, yet sufficiently nutritious—what the stomach can digest with ease, and has no tendency to produce constipation.

The patient should be directed to take moderate exercise; and if the bowels are disposed to be costive, a daily evacuation should be secured by the administration of an enema of warm water, or one of rich flax-seed tea, say from half a pint to a pint, to be given every evening, preference being given to the night-time, as the patient can then assume the recumbent posture, which, combined with the rest, affords the greatest protection from subsequent pain.

Instead of the enema, or in conjunction

*Read before the Phila. County Medical Society, November 23, 1892.

with its use, the action of the bowels may be regulated by the employment of some mild aperient, such as the patient has found by experience to agree with him.

All drastic purges should be avoided, as they are more or less stimulating and irritating to the extremity of the rectum.

The pain and spasm of the sphincter muscles attending the evacuation of the bowels is best relieved by the use of a suppository consisting of:

℞—Ext. belladonnæ..... gr. ⅛ to ½
Cocain. hydrochlor..... gr. ¼ to ½
Ol. theobromæ..... gr. x.
Misce et ft. suppositoria j.

One suppository to be employed about half an hour before the enema is given, or a movement of the bowel is expected.

Iustead of the suppository, an ointment of extract of conium may be used, as recommended by Mr. Harrison Cripps:[1]

℞—Ext. conii.. ..... 5ij.
Olei ricini.. ..... f 5iij.
Ung. lanolini.....q. s. ad 3ij.—M.

A small quantity of this ointment should be smeared over the parts five minutes before a passage, and again after it has occurred.

The various methods of treating anal fissure may be divided into the *palliative* and the *operative*.

Palliative Measures. — Palliative treatment will meet with success in cases in which the fissure is tolerably superficial and of somewhat recent origin, especially when there is no great hypertrophy of the sphincter muscles.

Allingham[2] states that the curability of the lesion does not depend upon the length of time that it has existed, but rather upon the pathological changes it has wrought. This same authority states that he has cured fissure of months' standing by means of local applications, when the ulcers were accompanied with polypi or hæmorrhoids, and when there was not marked spasm or thickening of the sphincters.

It is essential to the success of the treatment of fissure, especially by local applications, that rigid cleanliness of the parts be maintained: for this purpose the anus and the adjacent portions of the body should be carefully sponged night and morning, and after each stool, with hot or cold water, the temperature being regulated to suit the patient's comfort.

In applying the various local remedies it is necessary first to expose the ulcer to view, and to anæsthetize its surface with a 4 or 8 per cent. solution of cocaine hydrochlorate, well brushed in with a camel's-hair pencil.

The application may have to be repeated once or twice, at intervals of about five minutes, in order to obtain the desired anæsthetic affect.

If any ointment has been used about the fissure the anus should be subjected to a hot-water douche before using the cocaine. as cocaine will not exert its anæsthetic influence on a greasy surface.[1]

Among the different remedies that have been used in the local treatment of fissure of the anus may be mentioned the following: Nitrate of silver, acid nitrate of mercury, fuming nitric acid, carbolic acid, sulphate of copper, the actual cautery, and chloral hydrate.

Of these topical applications the nitrate of silver is the best. Its effects are various: it lessens or entirely calms the nervous irritation, which is so important a factor in producing spasmodic contraction of the sphincters; it coats and shields the raw and exposed mucous surface by forming an insoluble albuminate of silver: it destroys the hard and callous edge of the ulcer, and tends to remove the diseased and morbid action of the parts.

The form in which this salt is usually employed is in solution (from ten to thirty grains to the ounce). The caustic stick may be also used.

To accomplish the best results the solution should be used once in twenty-four or forty-eight hours, according to circumstances. It may be applied by means of cotton attached to a silver probe or to a piece of wood.

The application is made by separating the margins of the anal orifice with the thumb and index finger of the left hand, and introducing into the anus the probe charged with the solution. The argentic nitrate is to be applied to the fissure only; a few drops are all that is required. If thorough local anæsthesia has been induced by the use of cocaine, the application of the silver salt produces little, if any, suffering, for by the time that the anæsthetic has lost its effect the otherwise acute pain

1 Diseases of the Rectum and Anus, second edition, London, 1890, page 189.

2 Disease of the Rectum, fifth edition, London, 1889, p. 215.

1 W. P. Agnew, M. D.: Diagnosis and Treatment of Hæmorrhoids, etc., second edition, San Francisco, Cal. 1891, p. 91.

of the nitrate of silver will have passed away.

After each application the part should be smeared well with an ointment of iodoform (thirty grains to the ounce). The odor of that drug may be disguised by the addition of a few drops of attar of roses. Iodol may be used instead and in the same way, but I prefer the iodoform, owing to its anæsthetic qualities. After the ulcer has been touched once or twice with the silver solution the effect will be, in the cases that are benefited by this treatment, a considerable mitigation of the pain from which the patient suffered when at the closet and afterward, and the sore will present a healthy, granulating appearance, and will slowly contract in size.

Some authorities speak highly of the use of acid nitrate of mercury, fuming nitric acid, carbolic acid, the actual cautery, etc., but their employment, with the single exception of carbolic acid, is attended with more suffering than follows the use of the nitrate of silver or the simple operative treatment presently to be described. Furthermore, the application of these remedies is not so certain to effect a cure as either of the two procedures just mentioned.

The daily introduction of a full-sized bougie made of wax or tallow, will sometimes act beneficially in cases of fissure by stretching the sphincter and producing such an amount of irritation as will set up a healing process in the ulcer. An application of cocaine or of belladonna ointment should be made to the part previously to the employment of the bougie.

In children and young persons, unless a polypus or a polypoid growth, or a congential contraction, complicates the fissure, it is almost always curable without operation. In children suffering from hereditary syphilis, numerous small cracks around the anus are common, and they cause much pain. Mercurial applications and extreme cleanliness soon cure them, but they will return from time to time unless anti-syphilitic medicines be taken for a lengthened period. [1]

Operative Treatment.—If, after a fair trial of the simple measures that have been recommended, the fissure does not heal, or if, as described by Allingham, [2] the base of the ulcer be gray and hard, and if on passing the finger into the bowel the sphincter be found hypertrophied and spasmodically contracted, feeling, as it often does, like a strong india-rubber band with the upper edge sharply defined, or if there should be a polypoid growth, or any other complication, local treatment will not effect a cure and operative interference will be rendered necessary.

There are three methods of repute to be considered in this connection: incision, forcible dilatation, and a combination of these two procedures, viz., dilatation and incision.

Incision. A fissure can be cured by making an incision through the base of the ulcer and a little longer than the fissure itself, so as to sever all of the exposed nerve-filaments and muscular fibres along the floor of the ulcer. In a certain proportion of cases this operation will meet with success, but it is not so certain and radical as the third method to be described.

It has the advantage over the other two operations, however, of being nearly or entirely painless under local anæsthesia produced by cocaine, and, therefore, when general anæsthesia is contra-indicated, or is refused by the patient, this method is worthy of trial.

Forcible dilatation. This is the operation recommended by Recamier, of Paris; Van Buren, of New York, and others.

It consists of the introduction of the thumbs into the bowel, back to back, and then forcibly separating them from each other until the sides of the bowel can be stretched as far out as the tuberosities of the ischia. It is well to place the ball of one thumb over the fissure and that of the other directly opposite to it, in order to prevent the fissure from being torn through and the mucous membrane stripped off. As pointed out by Allingham, [3] it is well to repeat the stretching in other directions until the entire circumference of the anus has been gone over. In this manner, by careful and thorough kneading and pulling of the muscles the sphincters will be felt to give way, and will be rendered soft and pliable. This procedure should always be practised with the patient thoroughly under the influence of an anæsthetic, and it should occupy at least five or six minutes. The operation is a perfectly safe one, but as it is no less

1 Allingham, op. cit., p. 213.

2 Op. cit., p. 217.

3 Op. cit., p. 226.

severe than the method by incision, and as it fails to effect a cure in some cases, I can see no advantage in adopting it instead of the more satisfactory and always successful plan of treatment—combined dilatation and incision. It may be found preferable, however, in some cases on account of the prejudice of patients against the use of the knife.

Rapid forcible dilatation for the cure of fissure is a method now tried by some surgeons and *apparently* with a fair measure of success.

The patient is placed under the influence of nitrous oxide gas, and the sphincters are quickly stretched either by manual force or else with instrumental power. For my part, I do not see how a satisfactory dilatation can be accomplished in this way. When the cure of fissure by dilatation is attempted under ether-anæsthesia—the muscular system being completely relaxed—the thorough paralysis of the sphincters occupies several minutes before they are felt to yield, and the strain upon the operator's thumbs incident to the operation, becomes very tiresome to say the least.

With anæsthesia produced by nitrous oxide, we obtain a suspension of muscular action, but no general muscular relaxation; hence, to suspend the function of the sphincters to such a degree as to remove the cause which prevented the healing of the ulcer, viz., the constant motion of the muscular fibres, we must exert a force which would be both detrimental and dangerous to our patient's welfare. Therefore, I cannot believe that this plan of treatment will be commended by the conservative surgeon.

Dilatation and incision. This method I believe to be a radical and unfailing cure for anal fissure, if skilfully and carefully performed. The following are the details of the operation: The bowels should be thoroughly cleansed by the previous administration of a dose of castor oil and an injection; after which, under ether-anæsthesia, the sphincters should be dilated in the manner previously described. The resulting hyper-distension of the anus not only affords rest to the parts, by the temporary paralysis of the muscles, but also, as pointed out by Van Buren, it stretches the sensory nerves of the anus, so that they cease for the time being to convey impressions, the result of irritation, to the nerve fibres exposed in the floor of the ulcer; in the same way that we find forcible stretching of the sciatic and the sensory branches of the fifth nerve relieves neuralgia.

Mr. Charles B. Ball[1] states that this theory of the temporary cessation of the function of the sensory nerves following the hyperdistension of the bowel receives considerable support from the fact which is frequently observed, that the first time the bowels move after the dilatation there is entire immunity from the pain which before was so severe.

The first step in the operation being accomplished—the dilatation of the sphincter—it will enable us to obtain a complete view of the lower end of the rectum and the exact limits of the ulcer. The fissure is now kept exposed by the fingers of the left hand, and a probe-pointed bistoury is drawn through its base, from within outward so as to incise the subjacent muscular fibres at right angles to their course. It is well to begin the incision a little above, and to end it a little below the ulcer, so as to insure its being carried quite through the sore.

Another method is that advocated by Mr. Syme, and is performed by transfixing the ulcer beneath its base with a small, sharp-pointed, curved bistoury, and cutting from without inward. This procedure endangers wounding the opposite side of the bowel unless it is protected.

The subcutaneous division of the sphincter, as recommended by some authorities, is not a satisfactory method, and is mentioned solely for the purpose of condemnation. It is not only uncertain in its results, but it is also painful, and in more than one instance has been followed by abscesses.

In cases in which the fissure is situated in the median line of the rectum, either anteriorly or posteriorly, care should be observed in making the incision, for the reason that wounds toward the coccyx split and separate the fibres of the external sphincter only, and are difficult to heal, while anatomical considerations will deter us from using the knife freely anteriorly: in the male from the bulb of the urethra being in close proximity, and in the female the shortness of the perineum, and the knowledge that division of the anterior fibres of the sphincter in women is

1 The Rectum and Anus, p. 136.

so frequently followed by incontinence of feces[2]

After any of these the patient should keep the recumbent position, and it is better to confine the bowels with opium, at least for the first forty-eight hours. After three or four days a laxative, followed by an enema, may be given, from which time daily alvine movements should be secured. In seven or eight days the patient can begin to move about, but for at least two weeks he should avoid standing too long on the feet. No dressing is required, except a small quantity of iodoform, which should be dusted over the ulcer, and the parts should be bathed well with warm carbolized water, night and morning, to remove offensive discharges.

Peroxide of hydrogen (Marchand's) may be used instead of the carbolized water.

In the majority of cases of fissure, healing progresses with great rapidity, but occasionally, after the wound has healed to a certain extent, healthy action stops, and the appearances of an anal ulcer are again produced. Should this occur, it will generally be found that some complication has been overlooked, such as a fistulous passage running from the ulcer beneath the mucous membrane of the bowels. The presence of such a passage might be suspected, if the discharge from the part is out of proportion to the size of the ulceration.[3]

Another complication consists of a small hypertrophied tag of membrane, or polypoid growth, situated at the base of the fissure, or on some other portion of the rectal wall.

The removal of these complications will aid the patient's recovery.

Society Reports.

LOUISVILLE CLINICAL SOCIETY.

Stated Meeting of Nov. 1st, 1892.

THE PRESIDENT, Dr. P. G. Guntermann, in the Chair.

PERITONITIS IN CHILDREN—CASES.

DR. J. A. OUCHTERLONY: I will mention a case that I have on hand at present which may become the subject of a laparotomy: A little girl ten years of age was perfectly well on Friday week ago. She went out to witness the parade which took place the evening of that day, and stood a long time on the damp ground; she experienced no unpleasant effects or unpleasant sensations of any kind that night, but the next evening, twenty-four hours afterward, she was suddenly seized with cramps and diarrhœa and had what seemed to be from the mother's account, an attack of acute intestinal catarrh. Sunday afternoon I was sent for, but being absent from the city, did not reach there until in the evening, when I found the child with rather profuse diarrhœa and slight fever, temperature 101° F. Under opium and bismuth she improved, but the fever did not go down, and since then the abdomen has become tumid and somewhat tender, the tenderness being more in the hypogastric region than anywhere else. She has a number of symptoms of peritonitis, but the bowels are freely open and the temperature is is not very high. She has no appetite and suffers a great deal from this tympanitic distension and tenderness; has a very high pulse, varying from 120 to 140 at times, and the question in my mind was, is that a case which would require or justify a laparotomy. The case has lasted ten days fully. There is evidently no obstruction; no vomiting; but the abdomen is characteristic of peritonitis; there is tenderness; there is dorsal decubitus; thoracic breathing; and while the temperature is not very high, there is that rapid small pulse which is so characteristic of peritoneal inflammation.

DR. A. M. VANCE: Do you think it could possibly be tuberculous trouble?

DR. J. A. OUCHTERLONY: There is no history of tuberculosis in the family either on the father's and mother's side, and the child was taken sick suddenly with acute symptoms. While she has not been narcotized by opium, it has been necessary to give it in order to relieve the pain.

DR. A. M. VANCE: Are the kidneys acting all right?

DR. A. J. OUCHTERLONY: She passes urine copiously.

DR. L. S. MCMURTRY: Does she seem to be growing better or growing worse?

DR. J. A. OUCHTERLONY: What little change there is, is for the better; pulse somewhat better, abdomen may be slightly

2 T. J. Ashton; Diseases, Injuries, and Malformations of the Rectum and Anus, etc., second American from the fourth English edition, 1865, pp. 49, 50.

3 Mr. Harrison Cripps; op. cit., p. 190.

less tense. Her expression is not that of peritonitis.

Dr. A. M. Vance; Did you find any worms?

Dr. J. A. Ouchterlony: No. She has had so much diarrhœa that if she had any worms they surely would have have been dislodged by this time.

Dr. A. M. Vance: It is certainly a very interesting case, and also a puzzling one. While the specific cause of this trouble cannot be located, I think there is one point about it:—If surgery is determined upon, an operation should be performed before it is done as a *dernier* resort, and in this way give the patient better chance of recovery from the surgery. I think oftentimes the patient's friends will only consent to having the abdomen opened in cases of this kind when it is too late to have any power left, on the part of the patient, to recover. I cannot imagine what the cause is, but it seems to me that it must be peritoneal trouble.

Dr. J. A. Ouchterlony: I felt that the necessity for a laparotomy might arise at any moment, and was deliberating in my own mind whether it was justifiable at the present time.

Dr. M. S. McMurtry: One anomalous feature the case presents is, that there is peritonitis and active diarrhœa at the same time opium is being administered. Peritonitis is nearly always benefited by diarrhœa, and it seems in this case like Nature was exerting herself in that direction to drain the peritoneum. Another feature is that we ought to be more cautious in deciding upon operative interference in cases of peritonitis in young subjects, than otherwise. It certainly would be a very nice point to know just what to do, and I think perhaps we have more responsibility in deciding when to interfere in the young subject than any other. I believe the course being pursued by Dr. Ouchterlony is the judicious one; that is, as long as the pulse is within a safe limit; as long as the child is well nourished and there is no evidence of obstruction, to watch the case closely and hold himself in readiness to interfere if there is any aggravation of the symptoms, or evidences of obstruction.

Dr. W. C. Dugan: One thing against peritonitis in this case, is that it began with diarrhœa: This seems to have been the initial symptom, rather than one which set up afterward. I am quite sure there is some peritonitis, but secondary to entero-colitis. The case may become one of appendicitis; one symptom, persistent pain, rather bears out the pathology of appendicitis, and it is probable there is a state of catarrhal appendicitis along with the general trouble in the intestines.

Dr. J. M. Krim: I saw for the first time to-night a case similar to the one reported by Dr. Ouchterlony, except that possibly in this case the trouble is due to impaction. A little girl about five years of age with several of her playmates ate a large quantity of walnuts last Sunday; at the time she was feeling perfectly well, and continued so all day yesterday, (Monday.) To-day the child began to vomit; has had no action of the bowels since Sunday; the mother gave her some castor oil and finally resorted to enema, without any result; the vomiting continued and when I saw her to-night the abdomen was apparently distended and very painful, particularly on the right side; she draws up the leg on that side so as to make her feel comfortable; temperature 102° F.

Dr. T. P. Satterwhite: Was there any induration or hardness in the right iliac region?

Dr. J. M. Krim: There seemed to be a little induration in the right side, but it may simply be an impaction of the nut in that region. Vomiting has not been stercoraceous at any time, simply substances which she has swallowed. I used the rectal tube, injecting about a pint and a-half of water.

Dr. A. M. Vance: It sounds more like a case of appendicitis than anything else.

Dr. L. S. McMurtry: In my opinion the trouble is most probably due to impaction, although it may be appendicitis.

Dr. W. C. Dugan: I would suspect appendicitis in this case owing to the localized tenderness, and tendency to favor that side, drawing the leg up, etc. I think the case is one that should be carefully watched.

AN EXPERIENCE WITH INTUBATION.

Dr. T. C. Evans: I had rather a novel experience about three weeks ago, in a case of intubation; patient, a child not quite three years old. Upon my arrival found the patient very cyanotic; the operation had been delayed until the last moment. I attempted to introduce a

tube used usually for patients three years of age, using the new O'Dwyer tube with double swell, but found I could not pass it without undue force and concluded to withdraw the instrument and insert a smaller tube. I withdrew the instrument and to my surprise the child ceased breathing. I had the Doctor in charge keep up artificial respiration while I was trying to screw on a smaller sized tube, but as the tube was a new one I found its obturator had a different thread from the screw on the applicator, so I had to go back to the three year old tube; meantime the child had not taken a respiration; had had a convulsion; the features relaxed; the jaw dropped and it was to all appearances dead. I introduced the larger sized tube, pushing it into the larnyx regardless of the apparent obstruction, and still the child would not breathe, and had no pulse. Artificial respiration did not seem to do any good, and I concluded to inflate the lungs by blowing in its mouth, which was very easily and quickly accomplished. After four or five inflations the child began breathing regularly. I found, however, that I had not only inflated the lungs, but had also inflated the stomach, and intestines as far as the large intestine, making the abdomen very prominent and tympanitic. A few minutes after the child was resuscitated, the air from the alimentary tract commenced passing off per rectum, and gave no further trouble. The after history of the case was that I removed the tube on the sixth day and had to re-insert it, no membrane coming away and the child had expectorated very little. On the tenth day I removed the tube again, when considerable membrane was thrown off. Dyspnœa returning I had to again re-insert it. On the fifteenth day I took out the tube. The patient is making an excellent recovery. I never saw a case before where the membrane was retained so long.

Dr. Wm. Cheatham: I have nothing to say in regard to the case, except to congratulate Dr. Evans on the result. I had a patient wear a tube nineteen days and get well.

INTRA-ABDOMINAL ABSCESS.

Dr. A. M. Vance: I was called by Dr. H. Goodman to see a lady fifty-two years of age, who had been sick with continual fever six and one-half weeks. She was taken ill suddenly at night and when the Doctor was called he found she had a sub-normal temperature. In twelve hours the temperature went up to 106 ½° F. Large doses of antipyretics were administered without any abeyance of the fever, so far as returning to normal temperature was concerned; it was reduced to 103° F., never going below 101° F. A few days before I saw the patient tenderness had developed in the left side, just in the loin. She was a very large woman, weighing at least four-hundred pounds; there was so much adipose tissue that nothing could be found by palpation except a slight flinching on deep pressure in the left loin. Following this high temperature she had three rigors. I determined that there must be an inflammatory process somewhere, and taking this tender part as my only guide, I made an exploration with a very long aspirator needle and found pus in the region around the kidney, and I determined to go after the pus the next day by the knife. I cut through about six inches of tissue and came to a cavity which was evidently near the kidney, and evacuated about a quart of very offensive pus, making the incision in the ilio-costal space. She was decidedly the largest person I have ever operated on, and the difficulties encountered from this amount of fat were great, as you could hardly tell where you were going, and it was impossible to get the patient in any position of advantage. I inserted two large drainage tubes, fully ten inches in length; washed out the cavity daily for four or five days, until pus ceased to flow in any quantity, and then removed the tubes because I could not get the proper gravity while they were inserted. She has done uninterruptedly well since the operation, the fever disappearing at once. She has had no interference of the renal secretions at any time.

Dr. L. S. McMurtry: I do not know that any remarks can be made, except to state that the case was very excellently conducted, as the results show.

STENOSIS OF THE LARYNX.

Dr. Wm. Cheatham: I saw a case about two and a half weeks ago with a history of stenosis of the larynx, which has been progressing for about six months, coming on gradually. The patient is a

child about two years and eleven months old. At that age we cannot make a laryngoscopic examination. I found no difficulty in introducing a tube beyond the stenosis, which entirely relieved the breathing. The tube was put in two weeks ago last Friday; I took it out yesterday, but had to re-insert it. I look upon the case as one of papilloma of the larynx, and probably will have to eventually open the larynx and remove the growth. There is no history of any specific trouble. I see Dr. Waxam reports a case in which a child wore a tube four years, and finally got well.

CASES OF COMPOUND FRACTURES.

Dr. W. O. Roberts: I had several cases of compound fractures that I intended to exhibit this evening, but for some reason only one of the patients has put in an appearance. They were all cases of very severe fractures with good results.

This is a man twenty six years old who works in a flouring mill, and who eight weeks ago had his forearm caught in the machinery. There were extensive contusion and laceration of the soft structures, and the bone was broken in a number of places. There were two wounds in the skin, one on the posterior surface extending from the elbow joint downwards for four inches, and one two inches long on the palmar surface. The arm was put up antiseptically and the wounds stuffed with iodoform gauze. Wounds healed without suppuration. I think he will have a very useful arm; you will observe there is very good motion both in the arm and fingers.

One of the other cases was a man fifty-five years of age, who had a compound Pott's fracture. The whole side of his leg was badly lacerated, and about four inches of the large bone protruded and stuck in the mud. I cleansed it as well as possible, cleansed the wound out thoroughly and put it up in the same manner as the first case reported, and the man has made an excellent recovery.

The third case was a compound fracture of both legs, occurring between the ankle and the knee. All of these cases have gotten along without any trouble, and they were all cases that I am satisfied would have been subjected to amputation before the introduction of antiseptic surgery.

Dr. W. C. Dugan: Do you expect complete flexion in the case exhibited?

Dr. W. O. Roberts: No, I hardly hope for complete flexion.

Dr. W. C. Dugan: The possibilities of asepsis in compound fractures is one of the greatest achievements of modern surgery. Many of you can recall a time when these lesions were looked upon as almost necessarily fatal. The surgeon felt when called to these cases that a calamity had befallen him. Since the introduction of aseptic surgery, these cases are sought after by the surgeons and the results are almost as favorable, if not quite, as simple fractures.

One word in regard to the use of gauze instead of drainage tubes: I believe gauze is far superior to tubes and should be used in all cases where it is possible to do so. I think in Dr. Vance's case it would have been better to have employed gauze instead of drainage tubes. I do not think there is anything equal to it.

I asked Dr. Roberts if he expected complete flexion for the reason that the upper end of the radius is dislocated anteriorly. This is a common complication. I should like to suggest that if complete flexion is very important, excision of the head of the dislocated bone above the bicipital tubercule.

Dr. L. S. McMurtry: Do you think gauze will drain away anything but serum?

Dr. W. C. Dugan: I do, I have used it often and with the most satisfactory result.

Dr. W. O. Roberts: I did the operation referred to by Dr. Dugan in an old case of anterior dislocation of the radius some time ago, with excellent results.

Dr. A. M. Vance: We can hardly hope to get the best results outside of the hospitals and infirmaries, until we educate the people concerning the value of asepsis and antiseptic dressings. I think this is a point that we all ought to make with the people, as it is an important element in our work. We should endeavor to educate the people so that when we apply our dressings, they will know how to conduct the case in our absence in a manner to produce the best results. I know I have had cases injured by meddlesome interference on part of the family changing the dressings, washing them off, putting on vinegar, turpentine, etc.

SUPPURATIVE OVARIAN CYST.

Dr. W. C. Dugan: I desire to report a rather interesting case I saw recently in Southern Indiana: The patient, a woman about thirty-two years of age, had a tumor of eleven years' standing in the left side; she was a delicate woman. She noticed this tumor after the birth of her first child. The tumor was then small and movable. As she changed position the tumor would move from side to side. It gave her little or no trouble up to about eleven months ago, when she was delivered the second time. She noticed that the tumor during this pregnancy had increased considerably in size, and differing from its former condition in that it had become fixed during the pregnancy. She suffered no great inconvenience from the tumor up to four weeks ago, when one morning she was taken with a severe chill followed by considerable febrile reaction. She had a number of chills every day, and considerable fever. The physician who attended her stated her temperature was 103½° F.; pulse 120; she was very feeble; lost flesh rapidly, being unable to take any nourishment, and vomited continuously. She had diarrhœa a good deal of the time. When I was called to see her, she was comparatively easy; had not had a chill for three or four days; temperature 102½° F., pulse rapid and feeble. She was very much reduced, weighing not to exceed seventy pounds, her natural weight being about 150 pounds. Considering the fact that she had chills and high fever, and sudden subsidence of pain, I took it there was a pus formation; did not think there was any doubt about it. If it was an ovarian cyst, we had the formation of pus in the sac demanding operation. When I saw her, pulse was 130, and hardly perceptible at the wrist; expression of the face anxious and haggard. She had that peculiar cachexia that all of us have often seen in cancers. She was told of the dangers of operation, and of the few chances she had of recovery. She said she wanted to be operated upon. She was put upon the table and an incision made in the left semi-lunaris. The peritoneum was found to be very much thickened and closely bound to the tumor, so I simply passed on into the cavity of the tumor and opened an abscess letting out a large quantity of very thick pus and broken down tissue. After evacuating the pus I washed out the cavity and started on one side to find how closely it was attached, and found it was adherent to almost everything in that region. I decided it was best to simply stitch the wall of this old cyst to the abdominal wall and tampon it which was accomplished in a short time, iodoform gauze being used to fill the cyst. The patient was taken off the table with hardly any pulse at all. I left her that evening. Her physician, a most excellent practitioner, agreed to see the case and remove the gauze the next morning and put in fresh gauze, and change the dressings every day. I heard from her two or three days afterward, temperature had dropped to normal, pulse to 95; she was able to take nourishment and retain it, and was doing well. I believe if I had attempted to remove the tumor, she would have died on the table. It was one of those cases of suppurative ovarian cyst, adherent to everything, so I simply stopped half way.

The point I want to call attention to in particular is the subsidence of pain when pus forms. I do not think this is fully appreciated by men who are not working in this line.

Dr. A. M. Vance: I remember assisting Dr. Cecil in an ovariotomy at the St. Mary and Elizabeth Hospital, tumor weighing twenty-five to thirty pounds, in which there was pus formation in an ovarian cyst, without any fever. It was a cold abscess, with no adhesions; the woman made a good recovery.

Dr. L. S. McMurtry: I think in these cases of suppurative ovarian cyst, the most common cause of the suppuration is a twisted pedicle. I have met with two such cases in the last month. When the pedicle becomes sufficiently turned to arrest the circulation in the tumor, it is very liable to undergo suppurative change.

Dr. W. O. Roberts: I should think had it been a twisted pedicle, there would have been gangrene of the tumor. I have seen one case of the kind.

Dr. W. C. Dugan: In regard to twisted pedicle:—Of course that was the first thing I suspected, but the adhesions were certainly of such long standing that it precludes the possibility of the pedicle being twisted. And, too, there was no indication of any interference in its circula-

tion, which would have existed had the pedicle been twisted.

Dr. J. A. Ouchterlony: The subject of laparotomy brings up a question upon which I would like to ask some information: In cases of perforation in typhoid fever, of course the only hope practically speaking, for the patient is to perform a laparotomy and excise the ulcerated portion and sew up the gut. I know it has been done, but do not know anything about the success that has attended this procedure. I would like to know if any of the gentlemen in the society have any information on the subject.

Dr. L. S. McMurtry: I believe Morton, of Philadelphia, has collected a series of all the cases he could hear of, and has done the operation several times himself—none of them successful.

Correspondence.

THE AMERICAN "CROWBAR AND SKULL CASE."

A correspondent of the Medical and Surgical Reporter writes us: While in Boston last summer I saw this skull and bar, and made the enclosed hasty sketch.

An article in Stone (*Vol. V., p. 493, 1892*), giving an account of the wonderful accident, prompts a description of this case which has gone on record as the most remarkable in the annals of physiology and surgery, while prominent physiologists are still unable to explain how the thing could have happened without causing death.

Phineas Gage aged twenty-five years, a native of Lebanon, N. H., was foreman of a gang of men, who were employed in blasting rock at Cavendish, Vt. Gage had never had a day's illness from childhood, and was as far as could be determined, perfectly healthy.

At the time of the accident, on Sept. 13, 1848, he was charging a drill hole for blasting and sat on a shelf of rock just above, but a trifle to the right of the hole, as he faced it. The powder and fuse were in position and he was in the act of tamping it in. He turned his head for an instant to look at his men at work behind him. His iron struck fire on the edge of the hole, an explosion followed and the tamping bar, 3 feet 7 inches long, ¼ inch at the small end, about 1¼ inches at the large end, weighing about fourteen pounds, was projected upward obliquely in the line of its axis, passing completely through his head and high into the air, falling several rods behind him, and was afterward picked up by one of the men, covered with blood and particles of brain. The man was thrown upon his back by the force of the blow and his extremities moved convulsively a few times, but he spoke in a few minutes. His men carried him to the road a short distance away and he rode home in an ox cart sitting up by being supported. When he arrived at his destination he got out of the cart himself with a little assistance, and an hour afterward walked up stairs with a little aid and laid down upon the bed where his wound was dressed. He was conscious but very weak from loss of blood.

The examination of the wound showed that the iron entered the left side of the face by the pointed end, immediately anterior to the angle of the lower jaw, passed obliquely backward, emerging in the median line, back of the frontal bone, near the coronal suture. The bones were broken in small fragments and forced upward and outward. The hole had much the shape of an inverted funnel, the edges of the scalp everted and the frontal bone badly fractured, leaving an irregular oblong opening in the skull 2 inches one way and 3½ the other, through which the pulsations of the brain were distinctly seen and felt.

The wound was dressed and the man showed no apparent signs of serious injury excepting a curious agitation of the legs, which were alternately retracted and extended. Then began a battle, the natural consequences of such an accident against the strong constitution of a healthy man. No one thought it possible that he could recover, but after a few days he began to improve and the fifty-sixth day from the accident the patient was up and walking

about the house and piazza. The sixty-fourth day he caught cold and serious consequences were, for a time, feared, but he recovered. Ten days afterward he was taken in a carriage and driven to Lebanon, N. H., a distance of thirty miles or more.

Gage passed the winter months in Lebanon, but returned to Cavendish the following April, carrying his iron with him. He was then in good health and flesh, but in his mind was weak and childish, and the sight of the left eye was entirely lost. He visited South America, passed some time in Valparaiso, then went to San Francisco, where his mother had moved. He died there of epilepsy, May 21, 1861, nearly thirteen years after the accident. The skull and iron are now in the museum of the medical department of Harvard University, and the illustration given herewith, shows the track of the iron through the skull.

ERYSIPELAS.

The mechanical treatment of erysipelas by means of strips of adhesive plaster is recommended afresh, by Wolffler (of Graz). This is applicable not only to the extremities, but also to the trunk, to the face, and hairy scalp (after shaving), and in its application makes a wall, obstructing the advance of the erysipelatous infection. Great care must be taken that the strips are so adjusted as to make a complete ring, and that the last applied do not relax the first put in position. To avoid relapses they must not be removed for at least four or five days after subsidence of fever and disappearance of the flush.

The statistics given by Wolffler seem very favorable, and the results are especially noticeable in the treatment of the facial cases. The cases of erysipelas in the lower extremities seemed to resist this method most stubbornly, which is also true of their resistance to the operative treatment proposed by Kraske and Riedel.

Should the treatment by plaster strips fail in these cases, we recommend the crisafication method.

Kroll (of Strassburg) adopts the same principle, but secures the end by the elastic compression of broad bands of rubber.

Gottstein (of Berlin) recommends that a one per cent. sublimate ointment, using lanolin for the base, be applied in thick layers twice daily, over all the erysipelatous and neighboring sound tissue. Over this a cotton dressing is applied.

Winckler (Bremen) advocates the treatment with oil of turpentine as suggested by Lucke. Several times a day (four or five times in very severe cases), the affected parts were well rubbed with oil of turpentine, using a brush, or wad of cotton.

Before the first application, thorough cleaning of the skin with ether, or absolute alcohol is advised. To avoid any dislodgement and dispersing of the germs, the friction should be made in the direction from the edge of the erysipelatous portion of skin toward the center. Over the diseased portion a cotton dressing is applied, and the application is renewed in from two, three, or four hours, according to the severity of the case.

The suspected point of entrance of the infection must be disinfected as thoroughly as possible, small ulcers cleaned of adhering crusts and covered with sublimate lanolin (one per cent.). Inasmuch as the use of turpentine is contra-indicated in cases complicated by albuminuria, the urine must always be examined before this treatment is entered upon.

Ichthyol, applied by von Nussbaum and Fersher in the Munich hospital, has been warmly recommended from every side; it is claimed to be a direct specific against erysipelas, which lessens the intensity of the disease and shortens its duration very materially.

It is usually applied as a salve (Ichthyol, Vaseline aa; or Ichthyol, Aq. dest., Lanolin aa,) two or three times daily on the erysipelatous skin, which has been thoroughly scrubbed with soap and water. Over this is laid a salicylated dressing and cotton. It is very important that the application be made not only on the actively inflamed skin, but also well out on the sound portion adjoining, and to continue it a day or two after the fall of temperature. * *

Ullrich (*Hosp. Tidende*) prescribes as follows:

℞ Ammon Sulpho ichthyol.....ʒ ss.
Ether Sulph.....ʒ ss.
Collod Elast.....ʒ i
Mix.

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THE MEDICAL AND SURGICAL REPORTER.

SATURDAY, DECEMBER, 10TH, 1892.

THE HYDRIATRIC TREATMENT OF TYPHOID FEVER.

It is taught in the schools and accepted by the profession that, generally speaking, 70 per cent. of all cases of Typhoid fever recover without treatment; about 15 per cent. will die with or without treatment and the remaining per cent. are debatable and treatment may decide the issue of life or death.

The treatment of the disease by cold water baths has made but slow progress in this country. A heroic measure, violating preconceived notions of proper treatment, apparently impracticable in private practice, it has been compelled to prove its merits beyond question.

The method of Brand consists in the following systematic procedure:

Whenever the temperature taken in the rectum reaches 102.2°F. (39°C.) the patient is placed in a bath of 65°F. A compress, wet with water about five degrees lower, is placed upon the head, or water at a lower temperature is poured upon the head and shoulders. The patient remains in the bath fifteen minutes, during which time he is systematically rubbed by the attendants and encouraged to rub himself. At the expiration of that time he is removed from the bath, and wrapped in a coarse linen sheet, over which a blanket is folded, the extremities being thoroughly dried and rubbed. A little wine or spirits is then given. This is repeated every three hours, unless the temperature remains below 102.2°F. The alimentation is liquid, nutritious, and carefully regulated. No drugs are administered.

The most recent report of its efficacy in hospital practice is given by Dr. J. C. Wilson (*Med. News*, Nov. 26, '92). In the service of the German Hospital the total number of cases treated by this method to June 1, 1892, is 226; the total deaths, 12—5.3 per cent. In the entire series of 226 cases relapses occurred in 19 instances; more than 1 relapse occurred in 2 cases.

The statistics of the German Hospital now rest on a sufficient number of cases and extend over time enough to warrant conclusions as to the efficiency of the treatment in an American hospital. It has reduced the death-rate in this institution nearly 50 per cent. from the best showing of previous years, and 66 per cent. from the most favorable statistics of the hospitals of the city under other methods.

It is the custom at the German Hospital to administer to the patient upon admission, if before the 10th day, a laxative dose of calomel, from gr. vijss-x, and in cases entering the hospital during the first week this dose is very often repeated; otherwise,

the management of the cases in almost all instances conforms strictly to the method of Brand.

Such results enforce their own lessons. If it will do so much in hospital practice it will also improve results in private work. If convinced of its positive value the American practitioner will allow nothing to prevent its use in private work.

Translations.*

By MARIE B. WERNER.

Dr. v. Velits presents a study on Osteomalacia and its Treatment with a Report of Two Cases, (*Zeitschs. f. Geburts. und Gynaek.*, bd 23, Heft. 2). The studies of Litzman and Hennig, published in 1861, proved that 80 per cent. suffering from this disease proved fatal. Porro's operation performed in such cases always being followed by an arrest of the softening processes induced Fehling, in 1882, to conclude that simple castration might be followed by a cure of this disease. Sänger, although opposed to the Porro operation, also stated in 1884, that the removal of the uterus and its adnexa, usually brought about a cure of osteomalacia. Baumann, in 1889, collected a series of 44 Porro operations with 24 recoveries, all of which were also cured of osteomalacia. Of 12 conservative Cæsarean only 2 were finally cured. Fehling reported in 1890, at the International Congress, the results of his studies and presented as characteristics of this disease: 1st. Menstruation aggravates the disease. 2d. Pain in the affected parts is at once relieved by an operation. 3d. The blood vessels were found enlarged in the organs removed, possibly pointing toward the cause. The ovaries show no marked change in their stroma. 4th. Fertility is increased, pointing perhaps to an increased functional activity of the ovaries.

Fehling, therefore, concludes that the cause may be sought in the ovaries—their pathological condition influencing reflexly the vaso-dilators of the blood vessels in the bone.

v. Velits has found that it attacks all classes alike, either rich or poor, is uninfluenced by lactation and not always induced by pregnancy, since virgins have suffered from it. This latter is substantiated by Fehling who saw a case in a virgin, and Fruzzi who reports a case of 3 years' standing in a virgin of 34 years, similar observations have been made by Henning, Michnow, Hofmeier, and Thorn. In two of the five cases seen in virgins, the uterine appendages were removed, resulting in a cure in both. In Fehling's last communication he presented a list of 20 cases collected by him, which were treated surgically and cured. The author adds to this number, 1 by Hofmeier, 1 by Lihotzky, 2 by K. Braun, and 1 by Thorn; 2 by the author himself make in all 27 cures of osteomalacia by the removal of the uterine adnexa, on record.

The author agrees with Fehling that fertility is increased in those suffering from this disease, but his microscopical studies of the ovaries removed failed to show any abnormal enlargement of their blood-vessels.

Aside from those cured the author has two other cases under observation, which he intends to report later and also gives a synopsis of 4 cases found in the hospital records from 1864 to present date:

1. 1872, Primipara, æt. 41. Contracted pelvis due to osteomalacia, rupture of the uterus, escape of the fetus into the abdomen. Death followed shortly after section.

2. 1877, Primipara, æt 18, illness dating back to the 3d month in pregnancy. Osteomalacia, spontaneous expulsion of the fetus at the end of term—died from sepsis.

3. 1881, Multipara (4) æt. 34. Desired admission to hospital during 5th month of pregnancy, osteomalacia, premature induction of labor. Male, living child, gradual improvement after the puerperal period. 1885, she was again able to go without crutches. 1886, she conceived again, all the former symptoms of osteomalacia returned in a more aggravated form, permature induction of labor. Male child, died soon after birth, the patient again improved.

4. 1890, Multipara (7) æt. 31. The first 5 labors were normal. The sixth was a forceps delivery. Symptoms of osteomalacia set in during the sixth pregnancy, The pelvis was so soft and distended as to permit the seventh labor to be an easy one.

* Translated for Medical and Surgical Reporter.

The author found it interesting to study location as a factor in the cases, and has concluded that in the western and northwestern part of Hungary, the greatest number of cases have been found, especially, however, upon the Island of Shütt.

M. Runge, gives the following interesting reports from the Göttingen Frauenklinik (*Archiv. f. Gyn.*, bd 41). First patient, pregnancy complicated with a congenitally displaced kidney and an ovarian tumor, ovariotomy in the fifth month; artificial induction of labor, and delivery in the seventh month; both mother and child survived. This is the fourth case of congenital displacement of the kidney as a complication to labor. In two, section was performed, the kidney was found adherent to the upper border of the sacrum, having in this position effectually obstructed the normal course of labor and made the premature induction of labor an urgent necessity.

Second. Pregnancy in the presence of complete closure of the uterine os following amputation of the neck for epithelioma and repeated subsequent applications of the hot iron. Crucial incisions in the cicatricial tissue failed however, to give sufficient space to effect delivery, there being danger of rupture of the uterus, craniotomy was resorted to, especially since the heart sounds of the fetus had become weaker and diminished in frequency. Normal puerperium.

Third. Placenta previa totalis. Child fully developed. Version by the combined method, death from acute anæmia.

Fourth. Osteomalacia. Porro operation, intra-peritoneal treatment of the stump. Complete recovery, patient æt 45, ninth pregnancy; the first symptoms of osteomalacia appeared during the third pregnancy. Forceps delivery of the seventh child. Craniotomy on the eighth.

Fifth. Operation on a child of 16 hours for congenital umbilical hernia. The hernial sac contained some intestinal loops and a portion of the liver; the tumor was about the size of a lemon—reposition proved impossible, the incision through the integument was made about 1 cm. from the insertion of the amnion, then came circularly around the swelling, the sac carefully opened, the liver freed from its peritoneal adhesions, the wound closed with silver sutures. The child recovered.

A. Schmidt presents an interesting report of 9 cases for radical cure of hernia (after the method of C. Schwalbe (*Deutsch Zeitschr. f. Churg*, bd. 24).

Schwalbe's method of cure by means of injections of alcohol into the sac after the reduction of the hernia, had in the author's opinion, never received the attention it deserved. (Schwalbe reported 1000 with but one death, which was not directly due to the method).

The technique consists in first securing an aseptic field for operation, by thoroughly cleansing the parts. The needle is thoroughly sterilized, the hernia having been reduced, the left index finger is placed into the abdominal ring, thus enabling the operator to guide the needle into the canal. One to 2 c. c. are injected at one time; the first solution is 50 per cent. which may be increased gradually to 80 per cent., but must never exceed this latter.

The number of injections differ with each individual case. The alcohol produces localized inflammation which aids in closing the canal.

To establish a cure both patient and physician are recommended to exercise patience, the time may extend over three months. In femoral and inguinal hernia, Schwalbe advises strongly that the patients remain in bed the first three or four weeks no truss being allowed. Umbilical herniæ can be treated at the office, the opening made by the needle is closed by adhesive plaster.

Children are usually anæsthetized before the injection is made. Complications sometimes met with are enumerated as follows: Some injected fluid passing through the open sac into the peritoneum may give rise to acute pains for several hours, or the needle may wound the spermatic cord, which would produce a transient acute hydrocele.

The author's personal experience with this method consists of nine case—six umbilical hernæ, 3 in adults and 3 in children; 3 inguinal hernæ, 1 adult, 2 in children. A complete failure was met in a fat man having a large scrotal hernia. An umbilical hernia in a healthy man was improved but treatment was unfortunately interrupted. The remaining cases were all cured and the time since treatment ranges from 3 months to 7 years. These results were the author's incentive for call-

ing upon the attention of the general practitioner.

Abstracts.

A case of snake bite treated by hypodermic injections of strychnia, ending in recovery is reported in the October number of *The Indian Medical Gazette* by Surgeon-General Cadge and Surgeon Captain Pratt. A Hindoo boy, æt. twelve, was seen half an hour after having received a bite from a cobra in the great toe of the left foot. The only symptoms present were pain, tingling and numbness in the left foot; the body was cold; and the child seemed drowsy. A crucial incision was made over the site of the puncture, and the wound was washed out with a solution of permanganate of potash, and a bandage applied tightly above the ankle. Five minims of the ordinary pharmacopœal solution of strychnia was administered hypodermically, and repeated every five minutes. After the seventh injection the patient was seized with tetanic spasms, and vomited. Treatment was suspended for one and a half hours, when drowsiness again became marked; injections were again resumed at intervals of ten minutes. After the sixth dose (making thirteen in all) severe spasms occurred. During the intervals small quantities of brandy and extract of chicken were given. About seven hours after the snake bite the spasms ceased and the patient complained only of headache and tightness of the ligature on his leg. There was an increase of temp. (103°) for an additional eight hours, then gradually it declined, the patient making a good recovery. The authors have thought this case worthy of record for three reasons:

First, Because there is absolutely no doubt that the boy was bitten by a snake.

Second, Because there is absolutely no doubt that the snake was a cobra. We have the identical snake preserved in spirits. In how many cases of so-called "cure" of snake bite is there proof that the offending reptile was really one of the "Thanatophidia?"

Third, Because our patient recovered from the effects of the bite, plus the effects of ⅔ of a grain of strychnia introduced into his system by hypodermic injection. Whether the poisons were in anyway antagonistic to each other is another matter. Be this as it may, we shall have no hesitation in trying strychnia again should the opportunity occur.

[There is one other important point to be considered and that is the quantity of poison deposited in the wound, which rests chiefly on the number of stings inflicted previously on other subjects.—*Ed.*]

THE SPECIFIC TREATMENT OF ENTERIC FEVER.

In a paper read before the One Hundredth Annual Meeting of the Conn. Medical Society, Dr. Gustavus Eliot, strongly recommended a form of specific treatment, which embraces the use of calomel, in connection with the tincture of iodine and carbolic acid. In an experience of eight years with this plan of treatment, he has had the happiest results and uses none other.

The first requisite towards success is, to begin early, as soon as correct diagnosis is made. He commences treatment in every case, by giving ten (10) grains of calomel every other day until four doses are taken, also a mixture containing one drachm of carbolic acid and sufficient quantity of tincture of iodine to make four (4) drachms. Give patient four drops in a wine glass of water every four hours. To one who has been taught that cathartics should always be avoided in typhoid fever, this bold medication may seem reckless but the author claims better results than from any other plan.

He claims that the duration of the disease may be shortened and in some instances its course may be arrested. The treatment should be carried out at least ten days.

To the skeptical, he urges a trial of this plan, not in a single case but in ten cases. Trust not to memory, but keep a record and note results.

If desired, mineral acids may be prescribed, but be cautious of weakening the heart by use of the newer antipyretics. He does not recommend the distressing of the patient by plunging him in a cold bath.

TIC DOULOUREUX.

In the *Virginia Medical Monthly* for November, Dr John Dunn records a series of cases of inveterate tic douloureux, of years

standing, resisting all forms of treatment, which on closer examination proved to be of reflex nasal origin.

He says that, if in medicine, one form of treatment, be ever oftener wrong than another—and it is—or the conditions less understood, it is in the treatment of neuralgia: Is no disease, is there so often prescribed a "tonic to build up the system," as in this class of diseases. Whereas a thorough examination will quite frequently reveal the cause of the trouble to be due to some abnormal condition of the nasal cavities which can be easily removed.

The two most frequent causes of reflex trigeminal neuralgia, are, hypertrophied turbinates, and septal spurs or ridges. This painful affliction may also be reflex from other conditions than the nose: as from the eye, or ear.

Having a case which is dependent on these causes, of course the rational mode of treatment would be to get rid of the hypertrophied tissue, which can be done, by any of the approved methods. But unless the operator understands his business, or follows out the proper after-treatment, he will find his work of no avail. Having removed the hypertrophied tissue or spurs, he may have severe hæmorrhages, which become very annoying.

Varieties of plugs, etc., have been recommended for this condition, all of which he has found to be deficient. The most satisfactory intra-nasal dressing he has used, is cotton soaked in pure semi-solid Albalini: A plug is made of the desired shape and size and inserted in the nose: The Albaline effectually checks the tendency for the raw areas to send granulations into the cotton, and acts as a good hæmostatic. It can be removed at any time, and is not irritant.

The more one has to deal with neuralgia of the trigeminus, the more will we be convinced, that it most frequently results from some ocular or intra-nasal trouble, and that internal medicine should be the last resort.

TREATMENT OF CYSTITIS IN WOMEN.

In a paper read before the Missouri Valley Medical Society, by Dr. Crummer, he advises carbonate of lithium, in doses of five grains, or Londonderry lithia water and Salol in doses of from twenty to thirty grains thrice daily, in the acute forms of the disease. In severer cases, especially those found in the puerperal state, washing out the bladder with antiseptic solutions. In chronic cystitis the same treatment is of great service. The physician, must use caution in introducing the catheter, for purposes of irrigation, or matters will be made worse. The ordinary double current catheter is useless; better use a single catheter with a rubber tube and funnel affixed; clean, hot water is then poured in, until the bladder is full, when the end of the tubing is lowered and the fluid runs out, repeating this maneuver as often as necessary. For infection, resorcin, or boric acid is best, never using more than two or three ounces of solution at a time, lest harm result from over-distention.

Uterine displacements do not cause bladder irritations, as was formerly taught. It is generally due to pelvic inflammation. Especially is this true of gonorrhœal salpingitis, which must be relieved by operative treatment or otherwise, before irritation ceases. Tincture of Hyoscyamus or of Belladonna will give better results than Opium for the relief of pain.

Book Reviews.

Diseases of the Lungs, Heart and Kidneys, By N. S. Davis, Jr. A. M., M. D. The F. A. Davis Co., publishers, Philadelphia and London, 1892. No. 14. In the Physicians and Students' Ready Reference Series. Price $1.25.

This volume also comprises a part of the topics lectured upon, by the author. in the Chicago Medical College. The different subjects are described in a clear, concise manner, perhaps going to the extreme of stating what is probable rather than positively true. In his treatment of disease, the author gives explicit directions, as to the use of drugs calling particular attention to the exact time when a drug is indicated, so as to get its best effects.

The chapters devoted to asthma and pneumonia are full and complete. The author boldly states his opinions and gives his reasons for the same. While the prescriptions are given in the metric system, they are also written in the regular way. It is a well written work, fully up to date, and should find a place in the physician's library.

Diseases of Women, A manual of non-surgical gynecology, designed especially for the use of Students and general Practitioners, by T. H. Davenport, A. B.

M. D. Second edition, revised and enlarged, with numerous illustrations. Lea Brothers & Co., Philadelphia, Pa., 1892. Price $1.50.

In writing this book, the author states that he had two main objects in view, vis: "to give the student clearly, but with considerable detail, the elementary principles of the methods of examination and the simple forms of treatment of the most common diseases of the pelvic organs, and, to help the busy practitioner to understand and treat the gynecological cases which he meets with in the course of every-day practice."

The rapid advancement made in the knowledge and treatment of pelvic diseases caused the author to thoroughly revise and re-write the second edition, which is brought up to date in harmony with the present views, held by our popular teachers of gynecology.

The book is of more value as collateral reading than as a text-book.

Hygiene of the Sick Room, A book for nurses andothers, being a brief consideration of Asepsis, and Antisepsis, Disinfection, Bacteriology, Immunity, Heating and Ventilation, and kindred subjects for the use of nurses and other intelligent women, by William B. Canfield, A. M., M. D., Philadelphia, Pa. P. Blakiston Son & Co., 1012 Walnut St., 1892. Price $1.50.

This neat and useful work is the outcome of a series of lectures, delivered by this well known author before the University of Maryland Training School for Nurses.

Each disease is taken up in turn, as regards infection, and the methods of management of discharges, etc., are fully described. Several useful formulæ for disinfecting solutions are given, together with thorough instruction for the disinfecting, utensils, privies, etc.

The chapters on prevention of blindness in infants, and on ventilation are of special importance. The author endeavors to show the connection between bacteria and disease so that the latter may be prevented by destroying the former. While the book is mainly intended for nurses its usefulness can well extend into the physician's store of knowledge. The printing and get-up of the work speaks for itself.

Turpentine oil has been found to be a powerful deodorant of iodoform, particularly serviceable in removing the odor of that drug from the hands, spatulas, mortars, etc. Wash with a little of the oil, and, half a minute later, with ordinary oap.—*Merck's Bulletin.*

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Periscope.

THERAPEUTICS.

MEMORIZING DOSES.

Dr. G. A. Wiggins gives the following rules:

1. The dose of all infusions is 1 to 2 ounces, except infusions of digitalis, which is 2 to 4 drachms.
2. All poisonous tinctures 5 to 20 minims, except tincture of aconite, which is 1 to 5.
3. All wines, from ½ to 3 fluid drachms, except wine of opium, which is 5 to 15 minims.
4. All poisonous solid extracts you can give ½ grain, except extract of calabar bean, which is 1–12 to ¼ grain.
5. All dilute acids, from 5 to 20 minims, except dilute hydrocyanic acid, which is 2 to 8 minims.
6. All aquæ, from 1 to 2 ounces, except aqua laurocerasus and aqua ammonia, which are 10 to 30 minims.
7. All medicated syrups you can give 1 drachm.
8. All mixtures, from ½ to 1 fluid ounce.
9. All spirits, from ½ to 1 fluid drachm.
10. All essential oils, from 1 to 5 minims.—*Pharm. Record.*

A NEW REMEDY IN DIABETES MELLITUS.

Professor Winternitz, of Vienna, recently drew attention to a domestic drug that he thought had been neglected. He related several renal cases that he had successfully treated by an extract made from the wild bilberry. His first experiments were directed toward the mucous membranes of the mouth, and finding it successful, extended his observations to the bronchi, bladder, and renal organs, where he met with equal success. He admitted having combined with the treatment the hydropathic applications, which were considered to have modified the avowed action and efficiency of the drug. Weil, of Berlin, has now added new testimony to the record of value attributed to this plant, in assuring us that it has acted in a wondrous fashion in apparently curing a young man of diabetes mellitus.—*N. Y. Medical Record.*

POISONOUS SYMPTOMS CAUSED BY EUCALYPTUS GLOBULUS.

Dr. Benjafield writes from Tasmania to the *Lancet:*

"I have been called in to cases of apparent poisoning by eucalyptus globulus, but all of them soon recovered. E. G.—, aged two years, climbed up to her mother's store of household medicines, and poured about a teaspoonful of pure oil on some sugar and swallowed it. Within half an hour she began to stagger. Then she became violently sick and lost all power over her legs, so that when attempting to stand she dropped down helpless. A sort of intoxicated torpor then set in. We could awaken her by shaking her and calling, but she immediately relapsed. The pulse was quick and strong; the pupils were slightly contracted. This lasted for about three hours, when she woke up perfectly right and ate a good meal. Another child drank an unknown quantity out of a bottle and had the above symptoms very marked; also had great difficulty in breathing; but, by report brought to me from the Bush, where it occurred, she recovered. From experience here, where we have never seen Asiatic cholera, I should expect it to be a good germicide and stimulant for this disease. It might safely be given in half-drachm doses, which would quickly saturate the system with the drug; or drachm doses in milk might be injected into the bowel."—*Md. Med., Jr.*

TREATMENT OF RINGWORM.

Crawford Warren, F. R. C. S. I., in the *London Lancet*, suggests the following treatment for this troublesome affection: The affected region should first be washed with soap and warm water containing a little carbonate of soda, and then well dried. Acetic acid should then be thoroughly applied with a small brush, and on the lapse of about five minutes, when the acid will have soaked into the part, an ointment composed of sixty grains of chrysophanic acid to an ounce of lanolin should be rubbed in. This treatment should be carried out daily for such a period as may be necessary.

ANTISEPTIC FORMULA.

Messrs. Christmas and Respant have endeavored to obtain a formula for an antiseptic solution that shall be powerful enough to destroy the microbes, and at the same time not so strong as to damage the organism.

The best results were obtained with the following formula:

℞ Acid carbolic..... 3ijss.
Acid salicylic..... gr xv.
Ess. menth. pip..... mx.
M.

A one-half per cent solution in water of this mixture destroys the microbes of diphtheria; those of typhoid fever cannot stand its action for more than half a minute. The anthrax bacillus is destroyed by a one-fifth per cent solution. This represents an antiseptic power five times greater than that of carbolic acid alone. Tuberculous sputa treated by a one per cent solution can be sterilized in a quarter of an hour.—*Weekly Review.*

PEROXIDE OF HYDROGEN IN INTESTINAL DISEASES.

Dr. Richards (*Med. Neuigkeiten*) has used this drug for twenty years. In carcinoma it removes the terrific odor, and, in combination with tannine, it reduces the secretions. Amongst other cases, the writer communicates one of ulceration (strumous) of the sacrum, complicated with adhesion and ulceration of the lower portions of the intestines and profuse suppuration in the rectum. At the same time the patient complained of an intolerable pain in this region, such as the author had never witnessed. Here a ten per cent. solution of the peroxide of hydrogen, with tannine and dilute hydro-chloric acid, gave the best results. Though the case ended fatally, the secretions and pain were easily controlled. In a case of chronic dysentery, with frequent dejections of thin, fetid stools, a solution of the remedy with tannine, injected high up into the intestine by means of a long rubber tube, once a day, produced at first discharge of pus or masses of pus and blood, and a cure in a short time.—*Med. Brit.*

COLD IN THE HEAD.

For cold in the head while in the acute congestive stage, there is no better remedy than gelsemium. One good large dose, say ten minims of the fluid extract, taken upon going to bed will effectually dispose of this troublesome and uncomfortable affection. One dose is usually sufficient. —*Medical Review.*

INFANT FEEDING.

A very important thing is the way the milk goes down into the child's stomach. The bottles are so constructed that the milk goes down too fast. Every child who sucks at the breast has to work for what it gets. One of the great troubles in artificial feeding is, the milk is cascaded into the stomach and immediately cascaded back again. Most of the sick babies are made so by some prepared stuff being cascaded into their stomachs in enormous quantities. Quantity is a great element in these disorders, and I have known too much food to make babies sick, even where the food was fresh milk.

I generally tell the mother to put a piece of pure, clean sponge into the nipple, so that the child must work with its gums and lips to draw the milk, and thus obviate the too rapid flow.—*Med. Era.*

CARE OF THE EYES.

Avoid reading when lying down. Sit with the back to the light or so the light will come over the left shoulder when reading, sewing or writing. When writing, should the light come from the right side, the shadow of the hand and pen or pencil falls on the paper, constantly shading the line of work and fatiguing the eye. Veils, especially spotted ones, are injurious to the eyes; and, if veils must be worn, they should be of the softest, clearest net. The eyes should be rested five or ten minutes after each hour's reading. The study of music and German is hard on the eyes, and the eyes should be rested more frequently and longer at a time when engaged in these studies. Avoid facing the lamp-light when studying. A bad stomach sometimes makes bad eyes. Attend to the digestion. Poor ventilation frequently weakens the eyes. When the eyes feel tired, bathe them with soft water, hot or cold, whichever on trial proves more comfortable. The hot water generally proves more beneficial.—*Ka. Med. In.*

In granulated eyelids, when the patient complains of dryness of the lids, the following treatment will give relief:

℞ Hydrarg. ox. flav..... grs. ij
Vaseline..... ʒ ss

M. Sig.: Apply a small quantity to the eye at bed-hour every night or every second night. When the ointment is too strong or too frequently applied at one time, the light will hurt the eye the next day.—*Kan. Med. Index.*

MEDICINE.

TYPHOID FEVER IN CHILDREN.

A. Moussous (*Arch. Clin. de Bordeaux*, No. 4, 1892) states that in a series of fifty consecutive cases of typhoid fever in children under the age of fifteen years he had only three deaths. He fully accepts the opinion that the disease is less serious in childhood than in adult life; there is less prostration, less hebetude, and seldom much diarrhea or pneumonia. At the same time the fever presents the same character as in the adult, and is often high—104° and even more; the pulse-rate is often also increased to 140, but this rapidity has not the serious significance which it would have in the adult, nor are complications so often observed. The disease, however, is more severe in infants under two years than in children above that age; this fact is called in evidence to support the view that one of the reasons of the comparative mildness of the disease in children is the activity of their digestive secretion, which tend to inhibit the growth of the pathogenic organism. Another reason he finds in the greater functional activity of the liver and kidneys leading to a more perfect elimination of the poisonous bodies produced within the organism during fever. On this head Moussous presents some new observations. Bouchard and others have shown that the toxicity of the urine is increased by typhoid fever, and that this toxicity persists for a varying period after defervescence, for as much as four or five weeks, when the disease is treated by the expectant method, for still longer if antipyrin is used. With the cold-bath method the toxicity of the urine is very high during the fever, but ceases quickly when defervescence has taken place (Roque and Weill); naphthol diminishes the production of the poisonous substances both during fever and during convalescence. Moussous finds that the toxicity of the urine in children suffering from typhoid fever is sometimes increased during the pyrexial period, sometimes at its close, but that in either case it becomes normal after a few days of freedom from fever. The elimination of the poisonous substances, therefore, in children who are treated by the expectant method, very nearly resembles elimination in adults treated by baths. Moussous does not recommend resort to

baths in the case of children, and notes one case in which serious syncope followed cold sponging. He advises the administration of laxatives every other day, a copious milk diet, and small doses of quinine.—*Arch. of Gynecology.*

SEXUAL HYPOCHONDRIASIS AND PERVERSION OF THE GENESIC INSTINCT.

Dr. Irving C. Rosee, of Washington, D. C., read a paper with this title, which was reported in the *Medical Record.* Omitting reference to such subjects as spermatorrhœa, venereal excesses, malformations of the genital organs, and the high degree of excitement often found among the insane, he limited his paper to the consideration of manœuvres of either sex to produce venereal orgasm independently of the conditions of normal coitus, and known comprehensively as genital abuse. Of all hypochondriacs of either sex, those who refer their sufferings to the genital organs, such as the onanists, nymphomaniacs, syphilophobes, etc., are the most miserable. It is an error to suppose that aberration of the genesic instinct is confined to our species, time, race, or latitude. Bestiality or sodomy has perhaps existed from all time. Juvenal mentions that monkeys were much sought after by women. A quotation from Plutarch indicates that there were relations between animals and human beings—men and women—in the Latin Empire. In our day this crime is less prevalent, though far from rare in large cities. The speaker mentioned numerous instances of sexual perversion which had come under the notice of the police in various cities in this country and Europe. A study of these cases shows that the question of sexual perversion is one of social hygiene touching mental pathology in many points. Lawyers and doctors and juries want to know whether such cases are criminal in their nature or are the result of insanity. Physicians recognize that continuous suggestion, or the reading of lewd literature, or excessive indulgence in fondling embraces under improper circumstances, etc., do effect the lower lumbar reflexes in such a way as to bring about sexual hypochondriasis, not to mention their influence as wide disseminators of immorality and as teachers of crime. Many of the methods of societies for preventing vice and bringing about prohibitory legislation as to vicious literature, etc., though well meant, are both reprehensible and impracticable. Overzeal leads to false philosophy and sophistry like that of the prohibitionists who would enact sumptuary laws. The treatment of such cases of unatural practices as have been referred to consist in prevention and education, with employment of proper medical and surgical measures. Self-control should be included, especially about the epoch of puberty. As an adjuvant nothing is better than gymnastic and athletic training. A verification of the judiciousness of this advice is often found in champion athletes, many of whom are temporarily impotent. —*Med. Age.*

RECTAL INJECTIONS.

The value of flushing the colon with properly sterilized water—hot, tepid, or cold—according to the special indications present, will be readily admitted in a long list of formidable diseases, some of which may be mentioned, as follows: Habitual constipation, with or without mental depression or active cerebral manifestations due to auto-infection, being so common, might be permitted to head the list; all occult nervous affections, associated or not with the uric acid diathesis, would naturally attract our notice, as it is well known that disordered innervation is generally conducive to the absorption of poisonous products from the alimentary tract. They are also serviceable in disease dependent upon pelvic congestion, such as uterine displacements, ovarian pains, and hæmorrhoids, for they contribute materially, though indirectly, to relieve the original cause, viz., hepatic insufficiency. In appendicitis, perityphlitis, and abscess, for which the *amœba coli communis* is now held responsible, they are invaluable.

Mild and even severe cases of dysentery and diarrhœa are often brought to a favorable termination without enemata, but it is safe to say that, with appropriate diet, all cases would be decidedly benefited, and many fatalities avoided, by the adoption of simple means. Enemata should find a place in the treatment of other disorders of this character, notably in the collapse of cholera morbus, yellow fever, and cholera, as well as in the conduct of cases of pleurisy or typhod fever.—*American Therapist.*

SOME INTERNAL USES OF CHLOROFORM.

In gastralgia with dilatation of the stomach; in the treatment of nervous vomiting; and of the vomiting of pregnancy, chloroform water in the dose of a small teaspoonful every half hour or hour is a very useful remedy.

In false croup employed in the proportion of one to ten drops in an ounce of water, to which is added a little glycerine; dose one teaspoonful every half hour; the effect is a very happy one.

In ulcer of the stomach small doses of chloroform given internally will often remove the pain and stop vomiting.

In the treatment of whooping cough three to six drop doses of chloroform in syrup will bring about very good results.

In the albuminuria and anasarca of pregnancy chloroform in twelve to twenty drop doses in sweetened water causes a rapid diminution in the albumen and the disappearance of the anasarca.—*Ex.*

MODE OF ACTION OF CALOMEL INJECTIONS.

P. de Michele, M. D., in a historical study of this subject, reproduced in *Merck's Bulletin*, thus summarizes his conclusions:

That calomel, administered by injections, is better tolerated, even in strong doses, than any other mercurial preparation, that it always produces in the tissues an inflammatory process with a subacute development, the final issue of which is a small residual and persistent cicatrix, that a dose of about 20 centigrammes of the remedy in a man requires for its transformation into albuminate and its absorption about 15 to 20 days; that iodide preparations administered at the same time by the way of the stomach accelerate considerably this transformation, so that they ought not to be used without great caution; that on account of its great efficacy, admitted at the present day by all clinicians, its moderate cost, and its capability for effecting the specific cure by two or three injections at long intervals without the least danger, the Scarenzio-Smirhoff method is not only a most valuable resource, but also one of the most important improvements introduced into anti-syphilitic therapeutics in the last thirty years.

HÆMORRHAGE FROM INTACT SKIN.

A Deriabin, of Osa (*Vratch*, No. 31, 1892, p. 784), reports the case of a previously healthy girl, aged eighteen, in whom there suddenly appeared, without obvious cause, a profuse hæmorrhage from the center of the tip of the nose, the anterior surface of the forearms, and the volar aspect of the finger tips. From the skin of the nose the blood escaped in the form of a single fairly thick stream, while from the upper limbs it ran in the form of numberless thin jets and drops, as if "from a watering-can." Sometimes the blood spouted in a jet more than a foot high, at others it simply oozed, while now and then the bleeding stopped altogether. The phenomenon lasted, with short intermissions, nearly four hours, and was followed by all the typical symptoms of acute anæmia (pallor of the face and mucous membranes, vomiting, giddiness, prostration, etc.), the girl gradually recovering in about four days. Careful and repeated examinations failed to detect any lesion of the integuments, except, perhaps, over the tip of the nose, where there could be seen "a largish orifice of a cutaneous gland plugged with a blood clot." The latter disappeared in a few days, "leaving a permanent bright red spot." The thoracic organs were sound, menstruation normal. The hæmorrhage did not recur up to the date of report (four months after the bleeding).—*Brit. Med. Jour.*,

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SLOW PULSE.

Among the causes of slow pulse are the following:

1. Diseases or injuries to the nerve centers, producing either irritation of the pneumogastric or paralysis of the sympathetic (accelerator) nerves of the heart.
2. Diseases or injury of the pneumogastric nerve, increasing its irritability.
3. Disease or injury of the sympathetic nerves of heart, paralyzing them.
4. Disease of cardiac ganglia, by which the influence of pneumogastric nerve preponderates.
5. Disease of the heart-muscle (degeneration), whereby it fails to respond to the normal stimulus.
6. The action of poisons, as lead or tobacco, either on nerve endings or centers. The poison generated in salt fish.

Another possibility is *malarial poisoning.*—*Dr. D. W. Prentiss.*

THE EFFECTS OF ACIDS ON THE FUNCTIONS OF THE STOMACH.

1. Acids throw down a considerable precipitate of mucus.
2. They increase the cellular elements of the gastric contents.
3. Their introduction is followed by butyric-acid reaction, most marked after hydrochloric acid.
4. Larger quantities of the acids result in a considerable effusion of bile into the stomach.
5. They stimulate the secretion of pepsin, but have no influence upon the secretion of hydrochloric acid.
6. Their long continued administration is followed by marked diminution of the secretion of hydrochloric acid.
7. Even in large quantities hydrochloric acid produces no gastric disturbances. On the contrary, a continued administration of the acid is attended with a feeling of well being.
8. The difference in the effect between acids and the alkaline salt on the gastric functions consists in the fact that the alkaline salts dissolve the mucus and decrease the secretion of pepsin, while the acids precipitate the mucus and increase the secretion of pepsin.

The disappearance of the alkaline salts from the stomach is followed by a decided increase of the hydrochloric acid secretion. This does not occur, or only to a slight degree, in the case of acids. Both th eacids and salts, in large quantities in continued use, have the same effect in lowering the activity, and finally in destroying the function of the glands secreting hydrochloric acid.—JAWORSKI, in *Centralblatt fur Klin. Med.*

THE DANGER of gall-stones, as recognized by many observers, are as follows:

There is danger of exhaustion from the repeated attacks.

Fatal collapse from pain may occur.

Fatal jaundice may supervene.

Dropsy of the gall-bladder and danger of it rupturing.

Empyema of the gall-bladder.

Abscess of the liver.

Local peritonitis.

Perforation of the gall-bladder or gall-ducts, causing abscess, peritonitis, septicæmia.

Intestinal obstruction or hæmorrhage.

SURGERY.

A modification of Teal's rectangular flap operation is suggested in the *Medical Record*, by Dr. Robert J. Reed, whereby the length of the flaps can be materially reduced. It is in case of injury especially where most of the sound tissue is on one side of the limb that this operation is best suited. In Teal's operation the ends of the flaps are stitched together, and this requires the length of the short flap to be one-fourth the circumference of the limb where the amputation is to be done, while that of the long flap is one-half the circumferenee. The modification suggested is in the manner of coaptating the flaps. Each flap being in breadth half the circumference of the limb, and containing only skin and subcutaneous tissue, the short one extends only to the level of the sawn bone, the long one being in length one-fourth the circumference of the limb. The sides of the long flap are turned up and stitched to the end of the short flap at the center of which they meet, the length of the long flap being equal to one-half the breadth of the short. The end of the long flap is thus doubled on itself and stitched together. The suture line is then in the form of a T, the horizontal arm corresponding to the arm of the short flap and the perpendicular extending from the center of the short flap to the fold in the end of the long flap.

AN INTRA NASAL TUBE.

A method of holding the nasal bones or cartilages in place after fracture or operation wounds without interfering with nasal respiration has long been desired (*Lancet Clinic*). Dr. J. P. Gibbons has apparently filled the long-felt want. He recommends tubes of perforated metal so shaped as to fit closely in the nares. The perforations in the tube permit of the normal functions of the turbinated bodies being fulfilled at least in part. By putting a small sieve in the end of the tube pollen may be excluded without stopping nasal respiration In this way the doctor hopes to ward off hay fever in those subject to this malady. By doubling a rubber tube over the metal one, and filling the interspace with air or water from a syringe, epistaxis may be checked while breathing is still carried on through the nose. For

this last purpose a female catheter will do as well. For use after operations, if the perforated tube is as successful in the hands of others as it is in those of the inventors, it will be a valuable addition to the armamentarium of the surgeon.

SUTURING OF DIVIDED TENDONS.

Dr. A. H. Meisenbach (*Medical Fortnightly*) says: In the suturing of divided tendons, in order to obtain good results the following indications must be met: (1), The utmost care in carrying out complete aseptic and antiseptic measures. (2), Enlarging the wound to such an extent that a free field for operation is obtained; extensive opening of a sheath, if necessary, to easily catch up retracted tendons. (3), Care in suturing the corresponding cut ends with silk or catgut, preferably catgut. (4), The ends of tendons, if ragged, may be resected, so as to get smooth edges. If not enabled on this account to approximate the ends, with an intervening suture good results may still be expected. (5), Careful suturing of the sheath with continuous catgut suture leaving an opening for drainage at the site where tendons are sutured. (6), Appropriate position on a splint, the parts being so placed as to relax the sutured tendons.

OBSTETRICS.

INFANTILE PARALYSIS;—TREATMENT.

At first, according to Dr. J. Simon, external methods are used, slight revulsion over the spinal cord about the origin of the roots of the nerves, with dry cups or application of croton oil, mixed with some menstrum; or mustard leaves rather than cautery points and the other more painful methods of vesication. Next give stimulating baths (in bed), using vapors, etc. Thirdly, sedation of the nervous system by chloral, aconite, or conium. In the second week combine electricity with tonics as follows: Galvanization by weak continuous currents (2 to 4 milliampères). Apply the positive pole by slipping it on the shoulder, and put the negative pole in a basin of water slightly salted, into which the hand is put, use this for eight to ten minutes, and notice that the positive pole does not blister the shoulder. If it gets too red reduce the strength of the battery. Later use the faradic current as a change, but with weaker current. Slight massage and friction may be made also. Give the following.

℞ Tincture nux vomica..... 1 gramme
Tincture colombo, } āā 4 grammes.
Tincture cascarrillæ, }
M. S.: Give eight or ten drops as a dose.

In eight or ten days commence an arsenical treatment by a half to one milligramme of sodii arsenias.

During convalescence use sulphur baths or salt-water baths, or sea-baths, for three minutes at a time only.—*Arch. of Pæd.*

GYNECOLOGY.

PREGNANCY IN AN OVARIAN SAC.

Dr. Mackenrodt has recently shown to the Obstetrical and Gynecological Society of Berlin (*Prov. Med. Jour.*) a very interesting specimen of an extra-uterine gestation, which would formerly have been hailed as an undoubted specimen of that disputed species known as "ovarian pregnancy." It was from a patient who had been successfully operated upon for extra-uterine pregnancy. The gestation cyst was about the size of a hen's egg. In the lower part of its wall were remains of ovarian tissue and a large corpus luteum separated by a thin membrane from the general cyst cavity. The amnion could be defined above, and the chorion and placental rudiment were easily recognized. The fallopian tube and its fimbraiæ took no part in the formation of the cyst wall, for the unaltered fimbriated extremity projected completely within the cyst. Blood had entered the ostium externum and had formed a secondary hematoma in the tube. Under what condition, then, could a cyst be formed containing the ovary, the unaltered end of the oviduct, and also an ectopic gestation? The explanation seems to be as follows: The patient was the subject of that congenital condition which is called an ovarian sac or ovarian tube (the ovarial tube of German authors). This was first described by Richard in 1853, under the name of tubo-ovarian cyst, and it was supposed to be an ovarian cyst which had established an adventitious connection with the tube. But it is now held that in these cases the fallopian tube ends from the first in a peritoneal sac which also contains the ovary. Considerations drawn from comparative anatomy support this view, for a further exposition of which the reader is referred to Mr. Bland Sut-

ton's recent work. Under such conditions as the above there had developed in the case under consideration an ectopic gestation within the ovarian sac. Such an event is not unique, but in all other recorded cases the fallopian tube and fimbriæ have taken part in the formation of the cyst wall, rendering the true nature of the development much less evident. Hence the special interest of this case. No embryo was discovered in the case, and the cyst ruptured in extraction.

VULVO-VAGINITIS IN YOUNG GIRLS.

Contagion is the most frequent origin. Mechanical causes (onanism, oxaluria defloration) have been noted rarely. An eruptive fever, eczema, impetigo herpes of the vulva are sometimes the origin. The more frequent cause is contagion, not venereal, but of varied nature. A lying-in woman who has blennorrhagic discharge and who transmits a purulent ophthalmia to her new-born may give a vulvo-vaginitis to the child who sleeps with her or who uses the same toilet articles.—*Arch. of Pediatrics.*

NEWS AND MISCELLANY.

A NEW PROFESSORSHIP IN THE JEFFERSON MEDICAL COLLEGE.

At a meeting of the Board of Trustees held on Wednesday, November 30th, 1892, Dr. G. E. de Schweinitz, was, on the unanimous recommendation of the Faculty, elected Clinical Professor of Ophthalmology in the Jefferson Medical College.

At the time of election Dr. de Schweinitz was Professor of Ophthalmology in the Philadelphia Polyclinic and lecturer on Medical Ophthalmoscopy in the University of Pennsylvania.

A DIPHTHERIA EPIDEMIC CAUSED BY ICE

The Washington newspapers report the singular origin of an outbreak of thirty-two cases of diphtheria, of which fifteen proved fatal, that occurred in a small locality in that city. The body of a child that had died of diphtheria was packed in ice for two days, and when the body was transferred to the coffin, the undertaker threw the ice on the ground outside his shop. Three children were seen eating the ice, and in eight days they presented acute symptoms of diphtheria and died in a few hours. In all, thirty-two cases of the disease were ascribed to the deposit of the ice on the ground.—*Medical Review.*

PUBLIC DUTY OF PHYSICIANS.

Herodotus tells us that the Babylonians had no physicians, that when anyone was sick he was carried into the streets and placed where the greatest number of passers-by could see him; everybody was bound to stop and consider the case, and if an individual paused who had suffered in what seemed to him a similar manner, he was compelled to explain the method of his cure. There is no necessity for this sort of thing now, although a large section of the public enjoys nothing more than suggesting remedies for all sorts of complaints, and dabbling generally in a little physic. But there never was a time in the history of civilization when there was greater need that everybody should recognize the fact that he owes a medical duty to his neighbor which he is bound to perform.

Dr. George Gould recently delivered an address in Philadelphia on the subject "Everybody's Medical Duty," in the course of which he bitterly complained of the way in which the public at large leaves the medical profession to struggle under its Atlantean world of deputed responsibility. The indifference, the want of sympathy, to say nothing of the actual opposition experienced by those whose work it is to contend against disease, is as discouraging to our profession as it is disgraceful to our age of science. There never was a body of men animated by a spirit of devotion and self-sacrifice such as characterizes the medical practitioners of the age. How is this devotion and self-sacrifice recognized? The quacks, the charlatans, and the knaves make fortunes, while educated and conscientious practitioners are expected to do a large amount of work for nothing. Up to now the work of the physician has been the cure of sick persons. Now it has largely become the prevention of sickness. Patients will co-operate more or less in the work of being healed of their diseases, and are not wholly ungrateful to the healer, but those who are in daily danger of becoming patients will do little or nothing

to assist the men who are fighting to keep disease from their door. They laugh at bacteria and mock at microbes; carry the germs of disease in their clothes from house to house; sweep up the dust of the streets in their trailing skirts; take little or no pains to disinfect the excreta from such infectious cases as occur in their own homes; oppose with all their influence the erection of hospitals for infectious diseases in their midst, careless as to what becomes of the patients so long as they pass not by their own doors; impede the efforts of medical officers of health and inspectors of meat and other food to improve the hygienic condition of our towns and the quality of food we consume; disregard the authoritative condemnation of the corset, and in a multitude of ways help to make the work of the modern physician as hard as possible. Chaldea and Babylon could have taught this, at least, that everybody is bound to help the State to the utmost of his power in the battle against disease and death.—*British Medical Journal.*

Writing of the physician on the witness stand in the *New York Medical Examiner,* Austin Abbott, Esq., Dean of the New York University Law School, says: If a capable expert witness with strong convictions proves to be weak, or produces a weak effect upon the jury, it is usually because he does not get farther than the expression of mere opinion. The strength of a medical witness is not in the confidence of his opinions, but in the intelligible reasons he is able to give for them. The cogency of expert testimony depends on moderate opinions clearly supported by reasons intelligible to the jury. Of course upon many subjects the jury may not be capable of understanding, in a scientific sense of that term, the reasons for an opinion; but they are very quick to feel the difference between an opinion for which the speaker can state clearly reasons the character of which are intelligible in a popular sense, and one who has an equally confident opinion but is at a loss to make it clear that he has good reasons. Next after non-partisanship, clearness and lucidity in describing such matters as the jurors can distinctly conceive appears to be important, with the ability to give strong reasons, intelligible if possible in detail, and if not, intelligible at least in nature, for the conclusions arrived at. And lastly should be mentioned the freedom to make frank statement of the existing scientific doubts or uncertainty regarding any of the non-essential points in the case.

WOMAN'S PLACE

Lies not in medical paths, according to the American *Practitioner and News,* which goes on to say: That woman is capable of high education, and of doing practical work in science, and doing it well, no man with the record of her doings before him can deny. And if, when the schools are open to her, and she has duly qualified herself for medical work, medical privileges and medical honors are refused her, no one can doubt the injustice of the refusal. Nevertheless it is certain that, except in a few specialties, medicine offers no place to woman for her best work.

The rule is simple: no work benefits woman if in its pursuit she is compelled to unsex herself; that she must do this in medicine admits of no argument. This being the case, the men of the profession have nothing to do but to courteously open the door for woman, bow her in, and trust to the law of the survival of the fittest for the consequences.—*Med. Review.*

A Complicated Case.—One of our physicians recently received the following letter from a country physician (?): "Dear dock I hav a pashunt whos phisicol sines shoes that the windpipe was ulcerated of, and his lung have dropped intoo his stummick. He is unable to swoller and I feer his stummick tube is gon. I hav give hym evry thing without effeckt. His father is welthy Onerable and influenshial. He is an active membber off the M. E. Chirsch and god nos I dont want to loose hym. what shall I due. ans. buy returne male, yours in neede."—*Ex.*

Like Other Folks.—Clem—"How's de doctah gettin on, Rastus?"

Rastus—"He ain't no bettah, Clem, an' he had to call in a brudder physician."

Clem—"Why don't he cure himself?"

Rastus—"Kase doctors is jes like other folkeses; wen day's sick dey's got ter hab a physician and when dey ain't sick dey kin cure derselves—"

Dr. Charles L. Dana has made a very careful study of 614 male alcoholics treated at the Bellevue Hospital. He believes that strychnine has a certain degree of specific effect in inebriety and in alcoholic intoxication. In acute alcoholism, when the system is overwhelmed with the poison, one-sixtieth of a grain every two or three hours; in the chronic form, it should be administered in good doses for a considerable time. In ordinary acute delirium of alcoholism, twenty to forty grains of chloral, repeated in smaller doses in two or three hours, and combined with digitalis and strychnine, is the safest and surest means of controlling the excitement and securing sleep. A preliminary laxative, and a careful diet of hot milk and beef tea with red pepper should be insisted upon. In febrile delirium tremens, depressants must be used with care; cold baths or cold wet-packs, with friction, must be applied every two or three hours while the temperature remains high. Hypodermic injections of morphine are rarely needed, and he does not advise them.—*New York Medical Record.*

Biggs—Speaking of long lives, I had an uncle on my mother's side who lived to the age of ninety-nine.

Diggs—Oh, that's nothing! My aunt Sally Smasher didn't die till she was past one hundred and eight.

Young Man in the Corner—I had a grandfather who beat that record all hollow.

Biggs—When did he die?

Y. M. I. C.—He didn't die at all. He's alive yet.

He Hadn't Taken Anything.—"Have you taken anything for your influenza?" asked the doctor of a long, lank, hungry-looking man who came to him complaining of being "all run down," his appearance verifying his words.

"Well, I ain't been takin' much of anything, doctor—that is nothing to speak of. I tuk a couple o' bottles o' Pinkham's bitters awhile back, an' a bottle o' Quackham's Invigorator, with a couple o' boxes o' Curem's pills, and a lot o' quinine and root bitters my old woman made up. I 've got a porous plaster on my back an' a liver pad on, an' I'm wearing an electric belt an' takin' quinine and iron four times a day, with a dose or two of salts ev'ry other day. 'Ceptin' for that, I ain't takin nothin'."—*Ex.*

Human Nature.—A little boy of four years has for some time had a habit of waking about midnight and calling for a drink of water. At last his mother told him that she would not get up any more to wait on him; that she would put a pitcher of water and a glass on the stand near his bed, and that if he wanted water in the night he must get up and get it himself. She placed the water on the stand in his sight and left him. That night, at the usual time, she heard the boy's call—"I want a d'ink o' water! I want a d'ink o' water!" But she paid no attention. He called two or three times, and after he had whimpered a bit she heard him get up and thump along the floor to the stand. And through the darkness came this very positive ejaculation. "I hope I thpill every jam jop."—*Med. Review.*

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY FROM NOVEMBER 27, 1892, TO DECEMBER 3, 1892.

The leave of absence granted Major John C. Skinner, Surgeon, U. S. Army, on account of sickness is extended six months on account of sickness.

Captain Henry P Birmingham, Assistant Surgeon, U. S. Army, is relieved from duty at Boise Barracks, Idaho, to take effect upon the expiration of his present leave of absence, and will then report in person to the Commanding Officer, Fort Grant, Arizona Territory, for duty at that post.

By direction of the Secretary of War, paragraph 3 of Special Orders, No. 232, October 3, 1892, from this office, directing Major Robert M. O'Reilly, Surgeon, U. S. Army, to report for duty as Attending Surgeon, in this city on December 15, 1892, is amended to direct him to so report, on January 15, 1893.

The ordinary leave of absence granted Captain Eugene L. Swift, Assistant Surgeon, U. S. Army, is changed to leave of absence on Surgeon's certificate of disability, and extended as such two months.

The extension of leave of absence granted First Lieutenant Samuel R. Dunlop, Assistant Surgeon, U. S. Army, and further extended one month.

So much of par. 2. S. O. 232, A. G. O. October 3 gr. as directs Captain Junius L. Powell, Assistant Surgeon, U. S. Army, to repair to Fort Monroe, Virginia, for duty at that post, is revoked, and he will upon the final abandonment of Fort Randall, South Dakota, report in person to the Commanding Officer, Jackson Barracks, La., for duty at that post, relieving Captain William C. Borden, Assistant Surgeon. Captain Borden on being relieved by Captain Powell will report in person to the Commanding Officer, Fort Adams, R. I. for duty at that post.

Major William M. Gardner, Surgeon, U. S. Army, is relieved from further duty at Angel Island, California, and will report in person to the Commanding Officer, Fort Keogh, Montana, for duty at that post.

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THE
MEDICAL AND SURGICAL REPORTER.

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Original Articles.

OBJECT LESSONS IN GYNÆCOLOGY.

By W. H. LINK, A. M., M. D.,
PETERSBURGH, INDIANA.

III.

CONSERVATISM IN GYNÆCOLOGY.

In country practice, "conservatism" and ignorance are synonymous terms. In cities like New York or Philadelphia some, teachers even, are known who arrogate to themselves the title of "conservatives," and pose as beacon-lights warning the inexperienced to avoid the dangers of heroic procedures. Upon closer view these men are usually found to be awkward and clumsy surgeons whose mortality, when they do operate, is very high as compared with their more skillful competitors. In order to avoid invidious comparisons, they turn away from all surgery possible and seek to hide their incapacity behind a sonorous title. This title they hope may convey to the unwary or the weak, an idea of abstract superiority in themselves combined with a most laudable solicitation for the interests and the safety of their patients. Such a combination of qualities they are most unwilling to concede to any whose success impel them to a course which leaves timidity shivering in imaginary grave-yards; a course compelled by experience because it finds ignorance plodding along beaten paths, learning nothing from the fate of those confiding victims of false diagnosis or delayed therapy whose whitened sepulchers, like milestones, mark the progress of "conservatism" along its chosen road. If there is any one thing in medicine that we country doctors do know the height, depth, length and breadth of, it is "conservatism" so miscalled. The word is dinned into our ears so much, held up before our eyes so often, that we sometimes suspect that one of its attributes will some day be found to be the long sought-for fourth dimension. Then our knowledge will be equaled only by our self-sufficiency, and he who foists anything new or bold upon us will be made to pay the penalty by having it first tried upon himself.

While we say that among us ignorance and "conservatism" are convertible terms, it must not be forgotten that there are two kinds of ignorance. When one makes every effort possible to keep in touch with the advanced thought and the most recent discoveries in the profession to which he belongs, and when his knowledge is only bounded by his opportunities, the severest tribunal extant will acquit him of the charge of culpable ignorance. Should his *conservatism* consist in standing by known truths and tried methods till better ones come his way, then the word in its meaning lies very close to wisdom. The country doctor, living far away from the great centers of medical thought and often existing only as a tangent to the great circle of medical knowledge, cannot accept for himself crude and unsettled theories or methods not backed by a very great success. For this reason he is the only true *conservative*—holding fast to all that is good and shunning what time, opportunity and experience have shown to be evil. Pope's couplet on the use of words is his chosen motto: "Be not the first by whom the new is tried; nor yet the last to lay the old aside." His antithesis is one who, having eyes, sees not, and having ears, hears not the things with which genius or perseverance is daily enriching professional knowledge. To tell him of something new or striking is but casting pearls before

swine. Instead of accepting as a blessing or as tidings of great joy, some newer method of surgery or some improved theory or newly-discovered fact in medicine, he only intensifies the darkness of his own blindness and deepens the shadow of his own ignorance by decrying the newer light of his more progressive brethren. He at once becomes proud of his ignorance. The world of medicine and surgery in his eyes holds but two camps, the "conservatives" and the inexperienced. In the first belong himself and all, who, like him, look upon the science of medicine as a closed book which it would be sacrilege for any one to add to or take from. He silences criticism and confounds argument by his constant reference to *his experience.* The greatest truths may be daily set before him, but they fall on unheeding ears. In such a man the obstinacy of youth has become the stupidity of age, and opportunities which might have brought improvement "have passed away and left no shadow of their loveliness on the dead waste of life." Envy of his more progressive contemporaries fills his heart with bitterness; and when he writes he dips his pen in the ink of detraction; while, his cowardice alone forbidding him to identify the object of his malice, covert innuendo and weak insinuation sputter on his written page like feeble glimmers from an exhausted tallow dip.

Conservatism of the better kind; that is *conservatism* which waits till questions are no longer debatable, and holds fast to that which has proven good till something better appears to take its place, which looks to the experience of the great hospitals and the general consensus of opinion to settle doubtful subjects of discussion; is commendable among the great army of country practitioners.

For the very reason that we all look to the cities, their teachers and writers, as guide-boards along our great professional highway, they should point forward not backward. A guide-board pointing backward may show us the way over a very good road, but it is one that has been pressed by our weary feet so long that we need no direction to find our way. A teacher living in a great city, surrounded by hospitals and dispensaries, spurred on by the magnetism of emulation, must, if he would retain our confidence or merit our respect, be among the first to show us the excellence of any new procedure, or of any great truth which has suddenly assumed proportions of importance When individuals so situated fall behind and begin to rehash old and abandoned methods, because their skill is unequal to the task of grasping with the new, great damage is done among men who accept their teachings. It is so much easier for everybody to go along as they have been accustomed always to do, than it is to learn and practice something new. Thus the old iodine, glycerine, hot douche, opium, poultice and tampons, are still prevalent in the hands of country doctors and the obstinately "conservative" city practitioners who whitewash the vaginal vault with a variety of medicaments for the cure of the various forms of tubal disease. Such a line of treatment being even yet set forth in most of the latest text-books. And men who have foisted upon the profession weak and puerile literature are daily adding to the mischief wrought by their books by filling the journals with a lot of the same kind of diluted nonsense. The honestly *conservative* or conscientious country doctor, reading both sides, is "betwixt the devil and the deep sea" until self-enlightened by his own experience. But while he hesitates his patients are lost. To illustrate the evil effects of bad literature and false "conservatism," I shall give a few short histories of the evils of delay, bad therapy, incorrect diagnosis, and mistaken pathology, as they have occurred within the last ten years in this county and as they have come under the observation of either my preceptor, Dr. Byers, or myself.

Case I. Mrs. B., married, mother of 4 children. Had an attack of pain in bowels, followed by complete obstruction. Dr. B., the attending physician, and at that time the leading practitioner of the county, diagnosed concealed hernia, gave a fatal prognosis, and called for counsel. Dr. B—r., an able physician from a neighboring county, was called. He concurred in the diagnosis and treatment, which under the "conservative" teaching of the time, was opium, fluid diet and rest. Fæcal vomiting supervened and, after lingering for more than a week, the patient died. At the post-mortem it was found that a knuckle of intestine had fallen through a tear in the broad ligament and, becoming strangulated, had produced all

the symptoms complained of, and been followed by death. The hernia was easily reduced at the post-mortem and the gut was not gangreneous. By a timely section she could have been saved. The bowel could have been lifted out, the rent in the ligament sewed up and the patient been left in as good condition as before. The diagnosis was arrived at by exclusion and was brilliant enough to satisfy the most critical; but the influence of the text-book lore, the absence, at the time, of any positive literature advocating the practice of abdominal section, led both of these physicions along the "conservative" track and a useful life was lost.

Case II. Mrs. H., mother of a large family of girls. Had suffered for a long time with pelvic abscess. She finally became very sick and the attending physician informed the family that if the pus burst into the bowel she would get well, otherwise not. At last the collection on one side did open into the bowel and she became better; but soon the abscess on the other side grew worse than before, and again the only hope held out was, that it might open into the bowel. But instead, it opened into the peritoneal cavity and she died in a few hours. This case offered a most brilliant opportunity for good surgery. Double pyosalpinx with ovarian abscess. But at that time such operations were not known out in the country. The teachings of Tait had not yet penetrated the back-woods, and the eminent men, who now so ably set forth the science of abdominal surgery in this country, had not yet found their voices. The men who furnished the literature for country doctors to read and ponder, prided themselves on being great head-lights of "conservatism" and taught that all abdominal work was necessarily fatal unless done in their private hospitals, while their statistics showed that most of it done there was equally fatal. Joseph Price, with his 123 sections done in courts and alleys and over livery stables, WITH BUT ONE DEATH,— had not yet knocked the wind out of the self-inflated gas bags who had been for years flooding the market with padded text-books and advertising private hospitals for abdominal work.

Case III. Was called in counsel, very early in my career as a physician, to see a lady, Mrs. T., 30 years old, mother of three children. Found her, as the attending physician said, suffering from peritonitis. She had great pain in the pelvis, a very sore belly, a high temperature and a very rapid and feeble pulse. She would not permit a digital examination because she said, "it hurt her so much she could not stand it." We had no trouble to decide that she had "idiopathic" peritonitis and that she needed stimulants and plenty of opium. It took a large amount of the drug to keep her quiet but we did not reach the limit of Alonzo Clark by a good deal. She kept growing worse for three days when she died. This, in the light that I now have, was a case of tubal disease with leakage and resulting peritonitis. A section would have saved her, but "conservatism" let her die. I do not feel culpable, for we acted according to the latest text-books; and the literature in the journals, that threw any light on the subject at that time, was scarce indeed. Whenever any man, a little in advance of the rest, did advocate surgical measures for the relief of such cases a dozen old fogies lifted up their voices in favor of hot water, opium, and such other tinkering palliations, until the country doctor was perforce, led to believe that the surgeons were veritable Jack the Rippers with mutilation only as the end of their efforts and the result of their work.

Case IV. O. L., girl; 16 years old; in the practice of Dr. H., attacked with sudden pain in bowels which rapidly developed into a well marked case of peritonitis of the "idiopathic" variety. Opium, diet, and rest were prescribed, together with stupes to the surface of the abdomen, with the usual "conservative" result— death. The doctor says that, with the light he now has, he is enabled to say that she had an attack of peritonitis due to appendicitis, and that a section would have saved her. But the old "conservative" teaching of both books and journals and from lecture rostrums in various medical schools, was thundering against anything like boldness especially in the country doctor who had no *private hospital.*

Just here, although not gynecological cases, I may with propriety quote the results of a few cases of appendicitis in men, because the subject comes under the head of abdominal surgery and gynæcology without abdominal surgery becomes nothing more than vagina-swabbing. There have been four deaths from appendicitis,

within the last six years, in this county. Every one of these cases was a good subject for surgery and all were sent to death by the old opium, poultice, do nothing plan. This state of affairs is to some extent yet going on, not only in this county but in every other county in this state, and I have no reason to believe that Indiana is behind other states in the scientific knowledge, boldness and skill of her medical men. People are dying by the thousand for want of the timely application of surgical means, and in view of this I wish to close with the statement I made at the end of lesson II: "There are too many operations by the few and too few by the many."

REPORT OF TWO CASES OF NEPHRECTOMY—RECOVERY.*

By LEWIS G. NOLTE, M. D.,
MILWAUKEE.

Surgery of the kidney has always been a subject of interest, but more especially during the last two decades. It has been of interest because during that time more has been done than ever before to elaborate plans of diagnosis in diseases of the kidney, especially for diseases of an inflammatory and suppurative character, and, if necessary, extirpation of this organ, when found diseased in such a way that radical means were called for. It was our own surgeon, Dr. Wolcott, now deceased, who first extirpated the kidney; but he did not know that he had removed it until after the operation. He had extirpated the kidney with a cancerous mass, unknown to himself until afterwards. The patient died on the fifteenth day.

The operation nephrectomy was, however, first resorted to intentionally by Simon, of Heidelberg, in 1869. From that time until 1884, when Weir, of New York City, published an able review in the *New York Medical Journal* entitled: "Extirpation of the Kidney," one hundred and fifty-two cases of nephrectomy had been reported.† Since then so many cases have been reported that it may be said that the operation is no longer a rare one. Nephrotomy is still more frequently performed; probably because less difficult. Still, I am sure, the two cases I report will be of interest.

Case I. P. R., aged thirty-three; M; United States; carpenter; family history excellent.

Although a carpenter by trade he had been doing the duties of shipping-clerk in a stove concern for the last seven years. Had always been well and, indeed, very strong until five years ago when he began to suffer pain in left side and loin. He noticed that he was losing flesh and strength but continued to work. As time rolled by he had to pass his water more frequently than usual until finally it became an annoyance to him. The urine became cloudy and ill-smelling; never had noticed any "gravel;" never had cystitis, or gonorrhœa, or any other venereal disease. He continued in this way until in the middle of June, 1889, he was taken down permanently, when, he states, he had lost at least forty pounds. He had been treated for lumbago, indigestion and lastly for typhoid fever with peritonitis. His urine had never been examined, he said. His last physician had treated him until a few days before I saw him, and his last explanation was that *the typhoid fever had settled in his left kidney.*

I was called to see him September 7, 1889.

When I first saw patient he was in bed. He looked very pale, emaciated and anxious. He complained very loudly of pain even when quiet, although he tossed about a good deal on account of it, for he was delirious at times. His temperature was 104° F.; pulse 128 and feeble; tongue furred, brown and dry. I was informed, that although almost three months had elapsed since he had to go to bed, he had hardly slept any. He was indeed in a "typhoid condition." but it was not typhoid fever. There were besides symptoms of typhoid fever, others both objective and subjective.

He had had for some time past pain with, but more especially after, micturition. There also had been a frequent desire to micturate. The urine was described to me as having been, and being now, pungent and cloudy; very little was passed at a time. He had had diarrhœa

*Read before the Milwaukee Medical Society, November 8, 1892.

†Weir, extirpation of the kidney—*New York Medical Journal*, No. 26, Vol. XL.

until three weeks ago, since which time he has been absolutely without any movement from his bowels. When he had the afore-mentioned diarrhœal movements he he would at times, not always, experience great pain in the abdomen, radiating from the left loin. At other times he had pains, described as dull and gnawing in character, always referred to the region of his left kidney and radiating therefrom. On examination I found left thigh well-flexed on pelvis; could not be extended without pain. The abdomen was moderately distended and tympanitic all over except toward the left loin where there was dullness. Abdomen was somewhat sensitive to pressure. In the left lumbar region there was considerable bulging, in fact, so much of a tumor that one could not help noticing it. It seemed to fluctuate.

In view of the fact that there were such clear indications of an inflammatory disease or the result of it—abscess, I did not hesitate one moment to insert an aspirating needle. The point of the needle had gone in about two inches, however, before any pus was drawn into the aspirator. Of course, the presence of pus settled the diagnosis, or, better, the means of getting rid of the pus. I at once decided to perform nephrotomy, or, if necessary, nephrectomy. The patient was very weak and anything that was to be done had to be done soon. So it was decided to operate next day although Sunday.

Operation: The patient was weaker than ever, having spent a bad and restless night, pain having been very severe. Temperature 103° F.; pulse 130 and feeble. He was in a pitiable condition indeed. It was decided to go ahead, however, and do what we could even if nothing more than a puncture of the abscess-sac resulted.

Ether was administered after patient had received a copious draught of brandy. I made an incision almost four inches in length, beginning about three inches from spinous process and immediately below the last rib and going outward and downward towards the crest of the ilium. The incision was right over the tumor. Every vessel was tied immediately, so as to keep the field clear of forceps. After severing muscles and fascia we came to the abscess wall, which I punctured once more with the aspirator needle and upon reassurance laid it wide open. Fully one and a half pints of very offensive, green pus flowed from the wound, exposing a large cavity to view. After irrigation one could recognize broken down kidney tissue and structure in the cavity. Little remained besides sac-wall (capsule) and inflammatory debris.

The patient continuing to behave pretty well, it was decided to remove the remaining kidney tissue and capsule. The deeper incisions were extended so as to conform with the length of the superficial one. In doing this I was guided entirely by the sense of touch. It was certainly interesting to examine this wound. I could very easily feel the lower edge of the tenth rib, the colon and the diaphragm. After much work and anxiety I managed to remove what there was left of the kidney, but it was piecemeal work on account of the fact that the kidney had extended well up under the ribs. Hæmorrhage was moderate. The stump was tied with braided silk and the ends left long for future extraction. As the stump was short I caught the distal side of the ligature with a large forci-pressure forceps and holding thus both pedicle and its ligature, it was left. Two smaller vessels were secured with hæmostatic forceps, but could not be tied conveniently, so they were left *in situ*. During the whole operation moderate pressure was made on the abdomen so as to force the bottom of the cavity nearer to the back. This was also done during the packing of the cavity with iodoform gauze. The wound was left wide open. This was done so as to be prepared, in case of hæmorrhage, to at once get at the vessels.

The patient rallied fairly well. Hot bottles had been employed throughout the operation and were continued for some time after. Brandy injections were frequently made. The patient was removed to his bed with the greatest care, lest we should disturb the forceps left in the wound, and for the same reason we kept him bolstered left side up.

When I called in the evening I found the dressing prettly well soaked with blood, but I was informed that what blood could be seen had shown itself within two hours after the operation, and had not increased any since. It was fully eight hours after the operation when I called,

and I therefore decided to leave the dressing undisturbed, all the more so because his condition was fair. At midnight he was the same; no more hæmorrhage. He merely complained of some smarting in the wound, the pain he had complained of before the operation had left him entirely.

Next day: Temperature 101° F.; pulse 100, of fair strength. Outside dressing changed; wound was left undisturbed. Had passed no urine; but I drew off about 2½ozs. with a catheter.

After this he passed urine himself. It increased in quantity. I did not measure it again. For the next three days the dressing was not disturbed, as the patient was doing well and the temperature was declining. As he still had some vesical uneasiness I began giving on the third day, 5 grains of benzoic acid three times a day, which seemed to do him good. On the tenth day I removed gauze packing and the forceps; irrigated the cavity and renewed gauze packing. Temperature was now 99° F; pulse 80. After this nothing eventful took place except that the ligature came away on the 20th day. All this time the packing was growing less, as the cavity contracted.

Patient was discharged cured after five weeks. Urine at time of discharge contained but few pus cells (probably from bladder), otherwise it was normal.

Three months after I had occasion to treat him for a wound of the leg and obtained some urine for examination. It was perfectly normal. He did not know how much he weighed now but he stated that he thought that he had regained all the flesh he had lost. At the time of his discharge I advised him to forever abstain from alcoholic beverages of all kinds and to drink as much milk as possible. I saw him at intervals for about two years and he continued well. He is well and living now.

Case II. A. T., æt. 20; U. S.; unmarried; upholsterer; family history—mother had died of consumption.

He had been ill during the winter of '90–'91; thought he had influenza. From the description of the ailment, I think he had influenza, but whether this had any thing to do with the trouble under consideration I cannot say. I was first consulted on March 3d, '91, and at that time he was suffering from an attack of subacute bronchitis, This soon disappeared upon treatment. He told me at this time that he had been treated for spinal trouble after the attack of influenza, and again for lumbago. After the bronchitis subsided he was by no means well. He continued to fail. He complained of pain in his back. It was an indefinite, dull pain. I examined his urine and found pus and albumen. He was pale, emaciated and nervous, and had been, as he was now, suffering from night sweats. I put him on a well-regulated milk diet in addition to other easily digested foods. Still he failed in strength and weight. That he had some kidney lesion was certain, but in what form I was unable to say. In June of the same year he came to my office and said he had pain in his penis and left testicle, besides a well-defined pain, dull in character on the left side of his back. He also said that he had to pass his water oftener than usual, and had on one occasion passed some clots of blood. On examination I found distinct pain on pressure on the left side over the kidney. I could detect no swelling through the abdominal walls or in the loin. I forgot to mention that he also complained of a moderate diarrhœa. Examination of urine revealed clots and shreds, albumen and pus. Did not examine for bacilli of tuberculosis. But from his antecedents and his general condition, I made up my mind that he had tuberculosis of the kidney. I told him that we would have to operate on him with the result that he remained away from my office.

On October 2, 1891, he returned to my office telling me that he had been waiting for me (I had been away on a six weeks vacation), and that since he had been to my office last he had noticed an enlargement in his left loin, and had considerable pain there. On examination I found a fullness where he had indicated it. There was pain on pressure, no fluctuation that I could obtain. The exploring needle brought forth pus after three attempts to obtain it. Operation was advised and was performed the next day.

Operation:—Just before the operation he called my attention to his left elbow, where he had a swelling which I made out as tuberculosis of the joint. Ether was administered. Incision was made pretty nearly as in Case I. only about one inch longer, and the kidney was soon reached.

The capsule was opened and several ounces of liquid pus flowed therefrom. The capsule was now torn wide open and it was found that the whole organ was one large caseous mass; it was much larger than the normal kidney should be. The caseous mass was easily removed in spite of its large dimensions and the pedicle tied. There was no hæmorrhage of consequence. The skin and muscles were united with catgut and silk sutures in the upper part, the lower half being left open for packing and drainage. He rallied quickly and made a rapid and uneventful recovery, except that a small sinus persisted for over two months in spite of iodoform bougies, etc. It finally closed. He passed water as usual the day after the operation and never had trouble with it thereafter. His diarrhœa ceased; probably due to the fact that he was confined to bed and to morphine given for the pain. A few days after the operation I treated his elbow with iodoform injections and continued to do so for some weeks after, and he did fairly well, but he never regained complete use of the joint. I advised resection of the joint and was denied the privilege of operating. I did not persist, for I expected more trouble. I did not see him after his fistula had healed, although I recommended constitutional treatment. He walked about and did fairly well, however.

In the spring of 1892 he called and was found to be pretty well advanced in pulmonary phthisis. He said he merely wanted to know what ailed him and wanted no treatment as he knew he would soon die. He died a few weeks later. Autopsy denied. The joint had become somewhat larger, but he had had no renal symptoms from the time of operation to the time of his demise.

I have looked extensively into the literature on the subject of nephrectomy and as there is now such a mass of it, I will only draw conclusions and give them here.

I have found, that in a general way, operators prefer the lumbar operation for suppurative diseases of the kidney on account of the advantage for drainage, and the avoidance of opening the peritoneum and thus infecting it. Many prefer to do nephrotomy preparatory to nephrectomy. Lange, of New York, says he now prefers to do the whole operation at one sitting, because he has found that patients do not gain anything by waiting, and besides the operator has cicatricial tissue to contend with in a secondary operation. Gerster says he has not made up his mind yet which is the better plan. Briddon, of New York, prefers the primary operation.

Large tumors of the kidney should be taken out through the abdomen. Drainage can be established through the back before or after the major operation, when the kidney is removed through the anterior abdominal walls.

The incision may be made posteriorly from the last rib to the crest of the ilium near the edge of the erector spinæ. Some prefer to resect or remove one to two ribs, twelfth and eleventh, when deemed necessary. Others caution against this procedure as the pleura sometimes extends down to the last rib, and has been wounded in operations of this kind. Some operators add a transverse incision to the vertical one, when more room is needed. Wyeth makes use of an oblique incision.

When it has been decided to operate through the peritoneum (anteriorly) the majority prefer the incision made through the linea semi-lunaris (Lateral Laparo-nephrectomy); others prefer the median incision (Laparo-nephrectomy), which is made just as in ovariotomy.

In a general way it may be stated that the lumbar operation presents more favorable statistics than the ventral. In cases of suppurative lesions of the kidney especially, in which it may be decided to operate anteriorly "cysto-entrorrhaphy" should always precede opening of the sac.

Note.—In the first case the ligature disappeared, nothing of the stump came away. Patient well. In the second case, patient also complained of diarrhœa.

FISSURES OF THE TONGUE.

The following (*Le Bulletin mèdical*, is praised:

℞
Carbolic acid..... 2.5 grams.
Tr. iodine..... } aa
Glycerine..... } 12.5 grams.

MOUTH WASH.

In an article on the mouth as a focus of infection for various diseases, MILLER highly recommends the following as an aseptic mouth wash:

℞
Benzoic acid..... ℥ i
Tinct. eucalypti..... ℥ v
Absolute alcohol..... ℥iv
Ol. menth. pip.....gtt. x

—*Brooklyn Medical Journal.*

Clinical Lecture.

BUFFALO GENERAL HOSPITAL SURGICAL CLINIC.*

PROF. ROSWELL PARK.

EPITHELIOMA OF JAW, INJURY TO SKULL, CYSTIC TUMOR OF BREAST WITH POSSIBLE MALIGNANT ELEMENT.

I have talked to you very often about malignant growths, and have referred to the question of justifiability of operation and the clear understanding which ought to exist between patient and surgeon as to the risk of operation. This patient who presents an aggravated form of malignant trouble I have brought before you to illustrate how determined some men are to take the chances of operation rather than to discuss the prognostic and pathological features of their cases, which are quite plain. Seventeen years ago, this man had a little growth—presumably an epithelioma—removed from the lip. He was free from any manifestation of malignant disease till a little over a year ago when a growth about the size of a pea was noticed on the neck and was shortly afterward excised. This I interpret to have been an infected lymph-node which had become adherent to the skin and was beginning to break down. A couple of months ago the trouble returned and was again removed. Since then it has recurred and it has been treated once or twice with cancer pastes. On still further recurrence of the trouble he went to the same man who applied the paste and was told that it was too late for a repetition of that treatment since anything which would eat out the cancer would eat out the artery also and that an operation would not be advisable on account of the danger of hæmorrhage from the carotid artery or the jugular vein. His trouble has been getting worse all the time and last night he went to his regular physician and told him that he was going somewhere for operation and the doctor kindly brought him to me.

Here is a man of fifty, on the lower part of whose face you can see a large tumor, ulcerating on the surface. There is no question as to the diagnosis—it is an epithelioma—but only as to its extent. It extends beneath the floor of the mouth and, though it may not be attached to the larynx, it is very close to it and is probably attached to the hyoid bone. It is firmly adherent to both the upper and the lower jaw and there is ulceration about the alveolar process. It lies closely upon the carotid sheath. I have spent nearly half an hour in the vain attempt to convince this man of the futility of operation. I have told him that a thorough removal of the growth is practically impossible and that if it were possible, there would be so much loss of substance from the operation that I could not bring the edges of the wound together. I have explained to him that an operation which was not thorough would excite a renewed activity on the part of the cancer cells and would, therefore, be worse than useless. I have warned him that he might die on the table and that, in any case, the operation would result in his death and I have told him that I did not want to act as his executioner. Even after all this has been said, he insists that he wishes the tumor operated on. Sometimes we find a case in which there is an excellent prospect for an early operation and after exhausting all our eloquence we can not induce the patient to submit to an operation. Here we see an instance of an equal determination under exactly opposite circumstances. If this patient had come to me two months ago, I might have advised operation as a matter of temporary relief. Now I can only advise him against operation. I have told him that I would not operate for a few days under any circumstances and have gotten him to promise to go home and make his will and talk the matter over with his family. If after all this, he still insists on operation, I have told him that I will consider the question again but I doubt whether it would be justifiable to operate under any circumstances. It certainly would not be unless I had given him to understand clearly about the gravity of his case. I have been accused of being too blunt in talking to patients about the dangers of operation but you can judge if it would be right for me to fail to let patients realize plainly what they may expect both from such a course and from the unmolested course of their trouble.

Yesterday there was brought into the hospital a young Polish lad who had been

*Reported by A. L. Benedict, A. M., M. D.

injured three or four days ago by a locomotive. There is a rather uncertain lesion of the brain and I have not yet been able to make a positive diagnosis. Yesterday he was unconscious and when he was disturbed or when I pressed about the wound on his head, he would cry as he does now but with this difference that yesterday he made no articulate sound, whereas to-day he realizes to some extent what I am doing and replies with some intelligence. The question yesterday, as well as to-day was, whether the case demanded operation. It certainly was not a case of marked compression of the brain. The bodily functions were performed well, his pupils were of the same size though somewhat contracted on account of the morphine which had been given to control his restlessness. He moved all his extremities and their movement is even freer this morning. I have had his head shaved since I last saw him and you can plainly make out the scalp-wounds, one on the fore-head, the other over the right parietal bone. There is some ecchymosis about his right eye but there is not sub-conjunctival hæmorrhage, as there probably would be if there had been a fracture of the skull, resulting from the working forward of blood along the optic sheath. There is discoloration of the back of the head extending well down into the cervical region. The temperature has not been high. This morning it is 100.5°. After spraying out the scalp-wound with hydrogen-peroxide and carefully disinfecting my finger, I insert it into the wound and find no irregularity of bone. The finger is the best possible probe for making such an investigation. As there is no indication of serious trouble within the skull, I will put back the iodoform compress, over the wound, give symptomatic treatment and be ready to interfere if necessary. My conclusion is that the boy is suffering from concussion of the brain and possibly some minute hæmorrhages which would carry the case over into the category of contusion. It is quite likely that there has been a fracture but I do not pretend to say where. If, in two or three days from now, there should supervene compression symptoms, you know that the interpretation would be meningitis with pressure from pus. I should explore the wound, trephine and wash out the suppurating localities. This complication, however, I do not anticipate.

This patient, a woman of sixty, has a condition of considerable interest in a diagnostic way. In the breast she has a tumor and the question arises first, as to whether it is benign or malignant, and second, as to what is best to do for it. About two years ago, she noticed a little nodule in the breast and this has slowly enlarged and there is the history also that, several months ago, she was struck in the breast by her drunken husband. Here is a breast very much deformed by whatever the condition may be, the excess of deformity being of rather recent development. I want you to note that the nipple is retracted, that the tumor is lobulated, and that at two or three points there appear glistening surfaces almost like soap bubbles. There are little pouches that fluctuate just underneath the skin, and if firm pressure were made over them, they probably would break. After the first injury by her husband, the little lump enlarged to the size of a hen's egg, and since the second injury, about two months ago, there has been a very rapid increase. The tumor appears to protrude at two or three points just beneath the skin. So far, I have not been able to find any enlarged lymph nodes in the axilla. Perhaps we should first consider whether this is an abscess or some cystic disease. Now, it would be possible to have an acute abscess develop at any time in the breast with or without a co-existing tumor, either benign or malignant. But we may dismiss the suspicion of acute abscess as the signs of inflammation are not marked enough and the only abscess which would have so long a duration as this growth has had, would be a tubercular one, while none of the indications of tuberculosis are present here. My opinion, given tentatively and subject to modification on examination of the excised tumor, is that there was a cystic disease of the breast into which hæmorrhage has taken place at the time of the blows, and I expect to find altered blood in the mass. The patient's age makes us suspicious of cancer and it is quite possible that there is a somewhat recently developed coexistent cancerous condition. I can scarcely imagine a cancer of the breast of three years' duration, occupying as much of the breast as this does, with which we should not find enlarged axillary lymph-nodes and also in which we should not find the breast more fixed than this. This

breast is easily movable over the pectoral fascia and although there may be some adhesions, it is not glued to the fascia as is the case in well marked malignant disease. We must bear in mind, however, the fact that a tumor in the breast of a woman of almost any age, although benign in its beginning, may undergo malignant degeneration. It is possible to have a tumor which, at one spot, is cystic and innocent, while in other places, scirrhous or round-cell infiltration is occurring. Whatever the exact microscopic condition, therefore, you will readily understand the necessity for operation. This is not a case to be left alone, it is not one to be treated simply by evacuating the contents of the little cysts and allowing the wounds to heal, it must be attacked radically, and the breast must be excised. If the condition is not essentially malignant, the prognosis is excellent; if it be malignant there is every probability of prolonging life. The retraction of the nipple which you see here is not necessarily an indication of malignancy. Here the nipple could scarcely be otherwise than retracted on account of the enlargement of the breast around it.

If the case is malignant, I shall not want to save any more tissue than is necessary to close the wound. If, on the other hand, it is benign, it is better to save as much as necessary of the overlying skin.

In operating, therefore, I shall take time to dissect the skin from the growth beneath and, then, if the appearance of the tumor is suggestive of malignancy, more skin can be sacrificed. As soon as the knife penetrates the skin, an abundance of altered blood comes out, showing that there has been a hæmorrhage from the blows received. On examining the mass removed, I find, at one point, very hard tissue, here at the base there is a little pus and anteriorly a multilocular cyst. The hard portion does not offer as much resistance to the knife as would most scirrhous cancers, but seems more like inflammatory infiltration. This breast, though presenting no positive evidence of malignancy, presents a far worse appearance than do the majority of cases of cancer. It is a lesson to us not to judge too hastily from the external appearance. I am not quite satisfied that there is no malignant trouble and I, therefore, extend the incision toward the axilla in order to search for lymph-nodes. Now I find, deeply situated, a number of nodes so enlarged as to afford a suspicion of cancerous infection and this makes it necessary to clean out the axilla. To be sure the presence of pus in the mammary structure might account for this lymphatic involvement; but it is much better for the woman to have this operation thoroughly done *now*, than to have to subject her to a second operation later.

Communications.

TREATMENT OF HEMORRHOIDS.*

By JOHN B. DEAVER, M. D.

In opening the discussion upon the treatment of hemorrhoids I will confine the few remarks I have to make to what I consider the most essential points. And first a word as so the formation of this form of tumor and its varieties.

To understand the origin of piles we must be familiar with the arrangement of the veins of the rectum. The hemorrhoidal veins number three—the superior, middle, and inferior. The superior empty into the portal system, while the middle and inferior empty into the general venous system. In the upper part of the rectum they are arranged longitudinally, While below they are arranged circularly in the shape of a plexus, the hemorrhoidal veins are destitute of valves. Owing to the office of the rectum and to the erect position, these veins are very liable to become dilated and varicose.

To speak of a dilated and varicose condition of the veins in themselves constituting a hemorrhoid is a mistake. The first step in the formation of a hemorrhoid is a dilated and varicose condition of the veins, I admit, but, in addition to this condition of the veins there must be associated with it inflammatory exudate.

Hemorrhoids are divided into three varieties—external, internal, and intero-external. Hemorrhoids which protrude at stool, and are capable of being replaced and retained within the sphincter are of the internal variety, while hemorrhoidal tumors situated outside of the sphincter which cannot be forced inside are of the external variety. The intero-external

*Read before Phila. Co. Med. Society, November, 23, 1892.

variety is a combination of the external and the internal. This variety occupies the verge of the anus, and is covered by both mucous membrane and skin.

The internal hemorrhoid is a varicose and dilated condition of the superior hemorrhoidal veins, therefore an affection of the portal system. The external hemorrhoid is a like condition of the middle and inferior hemorrhoidal veins, therefore an affection of the general venous system.

In the intero-external variety both sets of veins are involved.

External hemorrhoids are met in any one of three different forms. The first is simply a venous tumor, the result of a phlebitis and consequent thrombosis of a varicose vein; the second, a tumor composed of dilated and varicose veins with proliferation of the surrounding connective tissue; the third, a tumor made up almost entirely of proliferated connective tissue.

Internal hemorrhoids are met with as one of two forms: the capillary and the venous. The capillary hemorrhoid is composed of the terminal branches of the arteries and veins and intervening capillaries. It is this form of hemorrhoid which bleeds upon the slightest irritation; its surface, too, is granular, and presents somewhat the appearance of a strawberry. The venous hemorrhoid is made up of anastomosing veins and connective tissue; this I regard as but an advanced stage of the capillary hemorrhoid.

The treatment of hemorrhoids is palliative and radical.

Concerning the PALLIATIVE treatment I will have but little to say other than that I regard having the bowels move daily, and observing the strictest cleanliness, the two most important indications to be fulfilled. Doubtless, in some instances one or other of the various astringent ointments, so commonly used, may be of some advantage, yet, I have little faith in their accomplishing a cure.

Before recommending radical treatment, the case is first to be thoroughly examined to determine whether such a procedure is justifiable.

Hemorrhoids may be symptomatic of visceral disease, of structural changes in the wall of the rectum above the pile-bearing area, such as carcinoma, stricture, etc. Under these circumstances the proper treatment would be the correction, if possible, of the condition giving rise to the hemorrhoids. Again, they are often secondary to disease of the uterus, the bladder—as when a calculus is present—an enlarged prostate or a stricture of the urethra, etc.

In advising radical treatment a careful examination should be made first to determine whether any of the previously mentioned conditions are present or not. The urine is to be carefully examined, when, if albumen is present and dependent upon heart or kidney affection of a serious character, operation is to be strongly advised against.

THE RADICAL TREATMENT OF EXTERNAL HEMORRHOIDS.—In the first form, that of the venous tumor, the result of a phlebitis, thrombosis, etc., it will suffice to incise the tumor freely, and turn out the clot, after which the wound is to be packed gently, and thus favor healing from the bottom. In the second variety, that of dilated and varicose veins with proliferation of the neighboring connective tissue, it will often suffice to stretch the sphincter muscles, when, if this fails, I strongly recommend removal of the tumor with the clamp and cautery; in the third variety of external pile I also use the clamp and cautery. In either of the two latter varieties, when the tumors assume considerable size, it may not be possible to engage them individually in the clamp; under these circumstances they should be bisected, as it were, and each half clamped, the redundant portion cut away, and the pedicle cauterized. It is in this variety of pile, when involving the entire circumference of the anus, that the Whitehead operation is applicable, but so far as my observation goes it does not offer any advantages over the clamp and cautery. When the external pile presents itself in the shape of a tab of skin it will suffice to remove it with a pair of sicissors; in the event of bleeding following, it can usually be checked by the application of a wad of styptic cotton, over which is placed a compress and bandage, or the bleeding-point may be touched with the point of the cautery. In the second and third forms of external pile, if inflamed, tense, and painful, I think it much more satisfactory to etherize the patient and remove them at once, and not attempt to reduce the in-

flammation by the application of lead-water, laudanum, poultices, etc. I have found this a much quicker way to dispose of them, and at the same time less painful to the patient.

Operations for Internal Hemorrhoids.—In few departments of surgery have there been more operations devised for the cure of any one condition than that of internal hemorrhoids.

The following is a list of the most important which have been advocated:

Excision; removal with wire écraseur; injection with carbolic acid or an astringent; the application of acids; removal by the galvanic cautery wire; dilatation of the sphincter muscles; clamp and cautery; crushing-ligature and Whitehead's operation.

Of these, I have had experience with the clamp and cautery, ligature, injection of carbolic acid, Whitehead's, and dilatation of the sphincter muscles. I now, however, rarely do any other than the clamp and cautery.

The advantages which the clamp and cautery possess over all other procedures is its universal application. The instruments required to perform this operation are a Smith's clamp and a pair of pile forceps, a pair of scissors, and a Paquelin's cautery. A tenaculum or vulsellum may be used in place of pile forceps.

The first step in the operation is the dilatation of the sphincter, which is followed by protrusion of the piles. The piles are now grasped with the forceps and the clamp adjusted. With the scissors the pile is trimmed down, leaving a pedicle one-quarter of an inch in length above the clamp. With the cautery iron at a dull-red heat the pedicle is reduced one-half-presenting a charred and dry surface. The clamp is now removed and the edges of the stump allowed to fold in. By leaving a pedicle as described, bleeding cannot follow the removal of the clamp. In cases, where the pile-surface is muco-cutaneous before the clamp is adjusted the skin should be divided with a pair of scissors, thus eliminating pain and subsequent contraction. The operation is completed by the introduction of an opium suppository, dusting the surface with iodoform, and the application of an antiseptic dressing. The after-treatment consists of rest in bed, light diet, and of the administration of one-quarter of a grain opium pill night and morning for from three to four days, when the bowels are moved by a laxative and an enema given when the desire to defecate is felt. After this the patient is allowed the freedom of the room.

The advantages of this operation are freedom from hæmorrhage, the rapidity with which it is performed, the absence of pain in the majority of cases, the absence of retention of urine, and the patient's being able to resume his or her occupation ordinarily in from one week to ten days. Pain, irritability of the bladder, and prolonged convalescence occur in neurotic subjects. Further, I believe tetanus is less likely to follow this than any of the other operative procedures.

The objections to the ligature are the pain which follows the tying of the pile, retention of urine, the amount of blood lost in debilitated subjects, and the prolonged convalescence consequent upon the process of separation of the ligatures.

The objections urged against the injection of hemorrhoids are the liability of sloughing and fistula, the formation of abscess, the possibility of a diffused inflammation with pyæmia, an extension of the inflammation to the peritoneum, and embolism. While injecting a pile the base should be constricted until coagulation takes place, to prevent an embolus from being carried into the circulation.

The objections to the Whitehead's operation are the time required for its performance, the amount of blood lost, and the danger of the stitches cutting out, leaving a circular granulating surface which may result in atresia of the rectum. Again, it is only applicable in a comparatively small number of cases.

Dilatation of the sphincter muscles, like the Whitehead operation, is only applicable in a few cases, especially those of recent origin, and in the case of prolapsed hemorrhoids which are prevented from repositing themselves on account of being grasped by the sphincters. In the former instance it may suffice to bring about a cure if proliferation has not taken place to any extent, which is always questionable. In the latter case it can only offer a palliative means. When internal hemorrhoids become strangulated and gangrenous, they should at once be removed, preferably with the clamp and cautery.

THE TREATMENT OF ISCHIO-RECTAL ABSCESS AND FISTULA-IN-ANO.*

By HENRY R. WHARTON, M. D.

I have been requested to say a few words this evening on the treatment of ischio-rectal abscess and fistula-in-ano to open the discussion upon these subjects by the members of this Society.

Treatment of Ischio-rectal Abscess.—In this form of abscess the purulent matter occupies the loose cellular tissue of the ischio-rectal fossa in close relation to the rectum, and from the anatomical peculiarities of the tissue in which it is situated it is apt to burrow widely and, if left to itself, to open into the rectum or through the skin into the region of the anus, and result in the production of one or other forms of fistula-in-ano, either the complete form or the external incomplete form of this affection.

To obviate this unfortunate result the prompt treatment of ischio-rectal abscess is urgently demanded, and I am decidedly of the opinion that attempts at abortive treatment of this form of abscess are worse than useless, that by such treatment valuable time is lost, and the surgeon has finally to resort to surgical treatment after extensive burrowing of pus has occurred with possibly perforation of the wall of the rectum.

It is, and has been for a long time, a surgical axiom that an ischio-rectal abscess should be opened promptly, and if so treated the probability of a fistula-in-ano resulting is much diminished. I formerly was satisfied to open these abscesses by a small incision, evacuate the pus, and in many cases a prompt recovery took place without the formation of a fistula, but in others a fistula resulted; whether the rectal communication was present at time of opening or resulted from the imperfect drainage secured by a small incision I am unable to say, but I am sure that the results I have obtained in these cases during the last few years since I have adopted Mr. Allingham's method of dealing with these abscesses have been much more satisfactory. By this method of treatment, even in cases where I have been able to demonstrate a rectal communication at the time of the operation, I have secured healing without the formation of a permanent fistula. Therefore, in any case of inflammation of the tissue of the ischio-rectal fossa, whether the evidence of abscess be clearly demonstrated or not, I follow the method which is recommended by Mr. Allingham, which consists in etherizing the patient and placing him in the lithotomy position, after having located the position of the indurated tissue or abscess; and a rectal examination by means of the finger will often assist in locating the position of the abscess. A free incision, several inches in length, is made through the tissue, outside of and parallel with the fibers of the external sphincter muscle, and the incision is gradually deepened until the pus cavity is reached. It is then slit up to the length of the skin incision and the cavity is explored with the finger, breaking down any loculi which tend to divide up the abscess cavity, and so make one cavity. The cavity of the abscess is next washed out with a 1: 2000 bichloride of mercury or 1: 60 carbolic acid solution and is then packed with strips of iodoform gauze, and a pad of the same gauze is placed over the wound, and over this a pad of bichloride of mercury cotton is laid, and the dressing is secured in position by a T-bandage. An opium suppository is introduced into the rectum and the bowels are kept quiet for three or four days.

The dressing is not removed for two or three days, and at this time the packing is usually loose and can be removed without difficulty; after its removal the cavity is injected with peroxide of hydrogen; it is then irrigated with a 1: 2000 bichloride of mercury solution; next the cavity is lightly packed with strips of iodoform gauze and the wound is covered with a pad of iodoform gauze and bichloride cotton. The same steps are observed at subsequent dressings, which are made at intervals of two or three days. The cavity usually heals rapidly by granulation and contraction, and in a few weeks it is completely healed.

Mr. Allingham recommends that the cavity be packed with lint saturated with carbolized oil, and I have employed this material, but now prefer to use the iodoform gauze, as I stated above.

I will report briefly a case in which this treatment was adopted. In January of

*Read Phila. Co. Med. Society, November 23, 1892.

this year I saw, with Dr. Musser, a lady, forty years of age, who had suffered for a few days with inflammation of the tissues of the ischio-rectal fossa. On examination of the case I found the left buttock for a distance of six or eight inches from the very verge of the anus, indurated, hot, and painful; no soft spot of pointing could be detected. An examination of the rectum showed bulging of the walls of the rectum in the left side, and upon withdrawing the finger a small amount of pus escaped from the anus. The patient also stated that some matter had been discharged from the rectum during the day. The patient was etherized and a curved incision four inches in length was made just outside of the line of the sphincter muscle. This was gradually deepened until the cavity of the abscess was opened and a free discharge of many ounces of pus followed. On introducing my finger I found that the cavity extended laterally for some distance and passed upward between the wall of the rectum and the sacrum. In fact, with my two fingers introduced to their full length in the wound I could not reach the upper portion of the abscess cavity. A careful examination failed to reveal the position of the opening into the rectum. The abscess cavity was thoroughly irrigated with a 1: 2000 bichloride of mercury solution, then packed with strips of iodoform gauze and a pad of gauze and bichloride cotton was placed over the external wound and held in place by a T-bandage. The patient did well after the operation. The cavity was dressed in the same manner very second or third day for the first two weeks, and at less frequent intervals after this time for six weeks, at which time healing was complete.

There is no question in my mind that there existed a communication between the abscess cavity and the rectum before the operation, as was shown by the discharge from the wound about a week after the operation of a piece of bone a little larger than a grain of corn. This bone, Dr. Harrison Allen examined for me and pronounced it to be a portion of a transverse process of a sheep's vertebra. It had been swallowed with the food, had ulcerated through the wall of the rectum, and had set up inflammatory action in the peri-rectal cellular tissue, terminating in this extensive abscess.

The points in the treatment of ischio-rectal abscess I would especially call attention to are: Early and free incision; thorough breaking down of any secondary cavities into one cavity; irrigation of the cavity with peroxide of hydrogen and a 1: 2000 bichloride of mercury solution or 1: 60 carbolic acid solution; packing with iodoform gauze and subsequent dressings made in the same manner, care being taken not to pack the cavity too firmly. Following this form of treatment the results of this variety of abscess in my hands have been most satisfactory.

Treatment of Fistula-in-ano.—Ball classifies fistula-in-ano as *complete* rectal fistula, in which there is a sinus leading from the rectum to some point in the skin in the region of the anus; and the *incomplete* fistula he describes as *internal rectal sinus*,—a sinus passing from the rectum into the peri-rectal cellular tissue; *external rectal sinus*,—one having an opening on the skin passing into the cellular tissue around the rectum, but not perforating the wall of the gut.

As regards the treatment of fistula-in-ano, the fact should not be lost sight of that it is possible to have a fistula-in-ano heal under simple treatment without operative interference. This is more apt to occur in recently formed fistulæ, but as the result of palliative treatment is always uncertain in these cases, and a long course of local applications is required, this method of treatment is not generally adopted. Allingham says that he has had twenty-one successful cases under this method of treatment, and a number of cases in which he was unable to effect a cure after prolonged treatment. When this form of treatment is adopted it consists in trying to obliterate the fistulous track by rest, free drainage, and the local use of stimulating applications such as carbolic acid, nitrate of silver, and sulphate of copper. Rest to the part is best secured by the wearing of a firm anal pad secured by a T-bandage.

At the present time the most widely adopted and successful treatment of complete fistula-in-ano is by incision. The patient is etherized and placed on his side or in the lithotomy position, a probe-pointed flexible director is then passed through the external opening of the fistula and conducted into the rectum; the finger is then passed through the anus until it

comes in contact with the end of the director, which is bent and brought out of the anus; the tissues on the director are then divided with a scalpel or by means of scissors, care being taken to see that the division of the fibres of the sphincter muscle is made at a right angle to the course of the muscular fibers; oblique divisions of the muscle do not heal well and are apt to be followed by a loss of power in the muscle. The main track of the fistula being slit up, it is next explored for the presence of branching sinuses, and if these are found they are slit on a director. In indurated sinuses it is often well to make an incision through the base of the sinus, which seems in many cases to facilitate the healing. If the cutaneous edge of the fistula or sinuses tend to overlap each other near the anus they should be trimmed off with scissors. The surface of the exposed fistula or sinuses is next freshened with a curette, and after being washed out with a 1: 2000 bichloride of mercury solution the cavities are packed with strips of iodoform gauze or lint saturated with carbolized oil. A compress of gauze is next applied over the wound, and over this is placed a pad of bichloride cotton, and the dressing is held in place by means of a T-bandage. The patient is given an opium suppository, and the bowels are kept quiet for three or four days.

The after-treatment of fistula-in-ano is most important, and many unfavorable results are due to carelessness in this particular. On removal of the primary dressing, at the end of two or three days, the sinus should be washed out with peroxide of hydrogen and a 1: 2000 bichloride of mercury solution, and a strip of iodoform gauze should be lightly passed to the bottom of the wound and allowed to rest between its edges. The mistake is often made in packing these wounds forcibly, which interferes with healing. A piece of gauze and a pad of cotton is next applied over the wound and is held in place by a T-bandage. The patient should be kept on his back two or three weeks, and the wound should be dressed in the manner described daily or on alternate days, and at the end of three or four weeks healing is usually completed.

In cases of fistula-in-ano of the horseshoe variety, one division only of the external sphincter muscle should be made, and the branching sinuses should be laid open by curved incisions passing parallel with and outside of the line of the muscle. Sinuses extending to the perineum or buttock should be freely laid open.

The treatment of incomplete fistula of the external variety, or of external rectal sinus, consists in passing a director into the sinus down to the rectum, and if on passing the finger into the rectum, it is found that the director is separated only from the finger by the mucous membrane, and its position is low down in the rectum, it is better to push the director into the bowel and bring it out at the anus and divide the tissues as in complete fistula, and treat the resulting wound as described after the operation for complete fistula. If, on the other hand, the rectum is merely exposed at the bottom of the sinus, it is well to lay the sinus freely open to this point, curette its surface and pack it lightly with iodoform gauze. Subsequent dressings should be carefully made and the sinus will usually heal, though the course of treatment usually extends over a longer period of time than in cases where the phincter muscle has been divided.

In internal incomplete fistula, or internal rectal sinus, when the rectal perforation is low down, a bent director should be passed into the anus, and its point should be passed through the rectal opening and made to project on the skin near the anus. This is cut down upon and exposed and the director is pressed through it, making the fistula a complete one, and the tissues on the director are divided. The subsequent steps of the operation and dressing are similar to those mentioned in the cases previously described.

When the rectal opening is high up and it is considered inadvisable to divide the sphincter muscle or the bowel to its full extent, a director should be passed through the internal opening and the surgeon should cut down on its point from an incision through the skin a little outside of the sphincter muscle. When it has been exposed the sinus or cavity should be curetted and irrigated and dressed with iodoform gauze, and by careful dressing the wound may be made to heal from the bottom, the rectal communications being shut off by granulation and subsequent contraction.

Among various methods of treating fistula-in-ano should be mentioned the

elastic ligature and the treatment by excision.

The elastic ligature is principally used in those cases in which the fistula opens into the rectum at a high point, where division by the knife would be accompanied by free hemorrhage. When employed, a cord of india-rubber one-sixteenth of an inch in diameter is threaded to an eyed-probe which is passed through the cutaneous opening into the rectum and brought out at the anus; before tying the ligature, the skin and mucous membrane to the edge of the anus should be divided so that the ligature can bury itself when tied, thereby saving the patient pain and at the same time facilitating the more rapid division of the tissues by the ligature. After the ligature has cut its way through the tissues it is often found necessary to dress the wound in the same manner as in cases where incision has been practised, to secure satisfactory healing.

The treatment of fistula-in-ano by excision has been recommended by some surgeons. The fistulous track being dissected out, the parts are brought together by deep sutures, and if primary union is obtained there is a great saving in the time of treatment. The form of fistula to which this method of treatment is best suited is the complete fistulæ which are not very deep and have a straight course; branching fistulæ, and ones very deeply situated, I do not think are favorable cases for this procedure. If in using this method of treatment it is found that primary union has not occurred, as shown by the escape of a little pus from the line of the incision, the sutures should be removed and the edges of the wound should be separated, and it should be lightly packed and treated—in fact, as a case in which primary incision had been practised.

As fistula-in-ano often occurs in patients suffering from phthisis, the question of the advisability of operating upon these cases often must be considered. The rule in these cases is to operate unless the patient's disease is in a very advanced state when no repair could be likely to take place. In the majority of phthisical cases the result of the operation is satisfactory.

The only serious complication following the operation for fistula-in-ano is incontinence of feces, and this is fortunately a rare complication. It may be guarded against by care in dividing the sphincter muscle only at one point, and by seeing that the division of the muscle is not an oblique one. When incontinence exists, it may be relieved in many cases by excision of the cicatrix in the sphincter muscle and by suturing the freshened ends of the muscle together by catgut sutures, or by applying a point of Paquelin's cautery to the cicatrix or to several points of the mucous membrane and skin of the anal margin.

RUPTURE OF BICEPS—INFLUENCE OF THE MENTAL STATE OVER THE FŒTUS.

By JNO. M. CURRIER, M. D.
NEWPORT, VT.

A case was presented to me a few days ago that was new to me. It was a rupture of the fleshy part of the right biceps muscle from the tendon of insertion. I have seen many cases of rupture of tendons from their insertions or origins but never before one of this character.

Mr. J., a farmer, aged about fifty-five years, three weeks previously, was lifting some logs with a lever, and on making an extra exertion felt something snap in hisright arm which disabled him. The arm continued lame until I was consulted. At the examination I placed a weight in the right hand, the elbow being bent at right angles, and directed him to raise the weight; while making the attempt, the belly of the biceps could be felt contracting and the severed end of the muscle roll up and recede from my finger. On placing my finger on the tendon and its insertion, when an attempt was made to raise the weight, no motion, nor tension were felt. All the soreness was felt at the lower part of the belly of the muscle. The treatment in such a case consisted in keeping the elbow flexed and supported at right angles; pressure upon the belly of the muscle be kept up constantly with a concave splint, to produce extension of the muscle, until union takes place. No attempt should be made to lift the hand nor move the arm.

A case has recently come under my observation which illustrates in a remarkable degree, the influence of the state of the mother's mind over the nutrition of the

child in utero. Anna R., aged nine years, was recently attacked with whooping cough; when examining the case I learned the following early history. Ever since her birth she has had what the parents termed a "heart trouble." I found a loud systolic murmur, very distinct over all the region of the heart, and very much louder over, and to the right of, the sternum. The pulse were feeble at the wrist, but regular. The child had always been anæmic, tiring easily, and always unable to endure much exertion. While the mother was carrying the child (about the third month) she sent the oldest child down to build a fire in the kitchen stove, in preparation for dinner. When she thought the oven was sufficiently hot the mother came down into the kitchen to commence dinner. She heard a low moaning noise like some one in distress, and on opening the oven door out came the pet cat, that had been imprisoned therein, nearly lifeless. It soon died. This scene made a great impression upon the mother's mind, which she did not fully recover from for several days. Pregnancy went on as usual after recovery from the shock. At birth and ever since the child was feeble. The children born before and since this one were healthy and robust. Since the birth of this child the parents have been busy picking up instances of children deformed from the mothers' fright during pregnancy. This seems to be a case where only the heart was arrested in its development by the state of the mind of the mother.

Society Reports.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Meeting of December 1st, 1892.

The President, Dr. W. H. H. Githens, in the chair.

Dr. Edward P. Davis presented a case of Pelvic Hæmatocele Treated by Abdominal Section and Gauze Drainage.

The patient married at seventeen and gave birth to a living child after a normal labor. Two months afterward she had a discharge of blood from the genital tract which continued for two months. Four years ago she became pregnant a second time but aborted. She recovered from this abortion and menstruated regularly till February 13, 1892, when she was seized with sudden pain, syncope and vomiting. When seen by the writer, six weeks after this, she complained of pain across the abdomen, of a bearing down sensation with a feeling of weight in the pelvis. An examination showed the uterus slightly enlarged and retroverted. A tumor of semi-solid consistence filled the lower portion of the pelvis and into this the uterus was merged. The uterus seemed to be part of the tumor and it was thought that a fibro-cystic tumor of the uterus or an ectopic gestation might be present. When the abdomen was opened, bloody fluid welled up from the right half of the pelvis. This fluid contained small clots of jelly-like consistency; the fluid and clots being the color commonly seen in hæmatocele. The fluid was found to have filled a sac situated behind the right broad ligament and extending downward into Douglas' cul-de-sac. It was without odor and no evidences of peritonitis or intestinal adhesions were present. No rupture of the fallopian tube could be found nor was the ovary apparently abnormal. The fluid was removed by sponging and the sac tamponed with iodoform gauze, the end of the gauze being brought out at the lower end of the incision. The patient's convalescence was normal, the gauze being removed several inches at a time.

After the operation her menstruation returned, regularly and painlessly, until early in September, when she again missed it for six weeks, and complained of pain and weight in the pelvis which was followed by flooding and the discharge of clots and material similar to that which had been expelled at a previous abortion. At that time she did not come under the notice of the writer but desired early in October an operation for closure of a laceration of the pelvic floor to correct a cystocele and rectocele of moderate extent. At this time she considered herself in the early weeks of pregnancy. On examination it was found that a condition of affairs similar to that which had formerly existed was present on the left side of the patient's pelvis, namely the uterus retroverted and a tumor of semi-solid consistence projecting into the cavity of the pelvis. The pelvic floor was closed, the patient making an uninterrupted recovery.

Whether this pregnancy is ectopic or intra-uterine is a possible question. The patient while not a bleeder, presents a remarkable tendency to hæmorrhage. It is the purpose of the writer to keep her under observation until the existence of intra-uterine pregnancy can be demonstrated or denied. If such be present, the effort will be made to prolong the pregnancy till a living child can be secured. If the pregnancy is not intra-uterine, and the pelvic tumor increases in size, there will be ground for considering the patient pregnant ectopically and this condition will demand appropriate treatment.

Dr. Charles P. Noble reported a Case of Successful Elective Cæsarean Section.

It was done for the relative indication and was elective in that, it being determined in the latter weeks of pregnancy that the delivery of a living child by the natural passages was impossible, the Cæsarean operation was decided upon and done during the last week of gestation but before the onset of labor. The reporter stated that the advantages of the operation, done before the onset of labor, are obvious as here we have a perfectly well ordered section in place of a hurried operation with the drawbacks of hasty preparations, perhaps strange assistants, bad light and faulty asepsis in some part of the technique. The danger of hæmorrhage from the failure of the uterus to contract properly in operations done before labor is purely theoretical and, excepting those cases where the uterus was paralyzed by the unnecessary practice of constricting it with rubber tubing, there was only one case on record where contraction did not take place.

The classical rather than the Porro operation was done, because the operator did not believe it proper, without grave reasons, to deprive a woman of the child-bearing function. The Porro operation should be limited to cases of fibroid tumors or those unfortunate cases where the operator has been called in late, after the patient has been long in labor and the danger of uterine atony and infection of the birth canal are present.

The patient was twenty-five years old, primipara, with scolio-rachitic flat pelvis the measurements being: A. S. S. 27.5 cm.—Cr. Il. 28.5 cm.—Tr. 33.5 cm.—D. B. [ext. conj.] 17.5 cm.—C. D. 8.75 cm.—C. V. 6.75 cm. She was told to return when seven months pregnant in order that the question of induction of labor could be determined, as against permitting her to go to term to be delivered by Cæsarean section. She did not return until the thirty-sixth week of pregnancy, when the child was too large to permit of its delivery alive. Symphysiotomy was considered but rejected on the ground that the pelvic deformity was extreme for the operation. The patient was prepared for operation by the use of baths, by having the bowels kept open, and by daily exercise out of doors. The operation was done on the 28th of September when the patient was estimated to be in the 40th week of gestation. When etherization was complete five grains of ergotine and one-fortieth of a grain of sulphate of strychnia were given hypodermically and an additional five grains of ergotine were given towards the close of the operation. The usual antiseptic precautions were followed. A free six-inch incision was made and the uterus incised *in situ*; hæmorrhage was free but not alarming and was kept out of the peritoneal cavity by pressing the abdominal walls against the uterus. The uterine incision extended well up toward the fundus, purposely avoiding the lower segment. The baby, a girl, was delivered by the feet and was soon crying lustily. As the baby was delivered, the uterus was withdrawn from the peritoneal cavity and the cervix was compressed manually. Contraction was good and the hæmorrhage at no time annoying. The placenta and membranes were carefully delivered and two fingers passed down through the cervix to secure a patulous canal for the lochia. Seven deep sutures [avoiding the mucosa] were now passed and tied; and fourteen superficial stitches. The uterus was now rinsed off with boiled water, the wound dusted with aristol and the usual dressing applied. The after-history was uneventful.

Dr. Mordecai Price reported a Case of Appendicitis.

The patient had suffered a number of years with what was supposed to be liver trouble; there was tenderness over the right side of the body, but no examination was made as there was no suspicion of any trouble up to eighteen months of her

death. Then her physician noticed a large symmetrical tumor filling up the entire lower abdomen. Operation was refused for the reason that, in her greatly emaciated condition and the feeble character of her heart, no encouraging prognosis could be given. The tumor ruptured and discharged through the bowel, after which the patient greatly improved. She had a number of such attacks extending over the eighteen months, when the tumor again filled up and ruptured, but she was not able to rally from the septic condition brought about by the suppuration.

The post-mortem showed a large abscess at the end of the appendix. The abscess was adherent to all the viscera and extended from crest of ilium to crest of ilium.

DISCUSSION.

Dr. Joseph Price said that, in dealing with troubles in the appendix, promptitude is of paramount importance. He scarcely attended a medical meeting without being told of dozens of deaths from appendicitis.

In regard to Dr. Davis's case, he would suggest that the patient is in precisely the same condition that she was when he operated and the indications are precisely what they were at first. He would dread to allow that woman to go over night, if she were his patient.

Dr. G. Betton Massey said that Dr. Price's case was particularly interesting in connection with that of Dr. Davis. In the one case, grave and serious, the waiting policy has been adopted; in the other it seemed to him that the operation had been too hasty. Dr. Davis's case is reported as a hæmatocele but he thought it had better be called a hæmatoma. He had no doubt that the abdomen was protected from invasion, as Dr. Davis had to separate adhesions to reach the blood. He had had two or three cases which disappeared under expectant treatment and forced absorptive methods with the negative galvanic pole in the vagina.

Dr. M. Price said that if Dr. Massey had ever seen a case of extra-uterine pregnancy he should think it would have taught him a lesson in regard to waiting. Dr. Price had seen ninety-seven extra-uterine pregnancies operated upon and had never yet, in twenty-three years experience, seen a true hæmatocele. Therefore, he concluded that true hæmatocele must be rare. He thought such a condition did exist but concluded that Dr Davis's case was one of extra-uterine pregnancy and that the condition would turn out to be the same on the other side also.

Dr. Charles P. Noble reported a Case of True Pelvic Abscess.

Mrs. H., aged 28, was delivered of her second child by a midwife, the labor being followed by septicæmia. Five weeks later she came under the notice of the writer. On examination the right broad ligament was found indurated and a mass of exudate extended on the right side of the abdomen almost as high as the umbilicus. At the operation the viscera in the lower right quarter of the pelvis were found fused together. The patient took ether badly and it was thought that an attempt to free the adhesions would result in a death on the table from ether. An unsuccessful attempt was therefore made to reach the pus by an incision near the anterior superior spine of the ilium. The patient improved for a few days, when a second attempt was made under chloroform, which however produced as much cyanosis as the ether had done. An incision was made directly over the broad ligament, evacuating several ounces of pus. With rubber drainage a satisfactory convalescence followed.

Twenty months later an operation was done for the cure of a ventral hernia which had formed at the site of the third incision. The operator was surprised to find that the adhesions had all disappeared except a point of adhesion between the omentum and hernial sac and another between the omentum and broad ligament. Both appendages were healthy, which demonstrates that it was not a pyo-salpinx but an abscess of the broad ligament.

The disappearance of the very extensive adhesions in this case is worthy of record as showing that peritoneal adhesions are not necessarily permanent. Undoubtedly acute pelvic cellulitis and true pelvic abscess do rarely occur as puerperal conditions, but they are extremely infrequent as compared with pelvic peritonitis, pyosalpinx, and purulent peritonitis.

DISCUSSION.

Dr. M. Price thought that leakage could take place from a tube and an abscess result which is not in the tube but walled up by the peritoneal inflammation,

making it extra-peritoneal. He was confident that a number of these abscesses, said to be of the broad ligament, are abscesses following some injury in the abdominal wall near Poupart's ligament, or between the peritoneum and the muscular structures of the abdomen, posterior to the peritoneum.

Dr. George E. Shoemaker said that abscess of the kidney sometimes occurred in this region as in the case of his own. Adhesions may be of a most serious character and invalid the patient. A short time ago he had operated on a patient who had been previously operated on by a member of this society, presumably in the best manner, but she had been for a year following the section a complete invalid. Dr. Shoemaker found a firm adhesion to the right broad ligament the size of a quarter. This had to be cut off and the bowel stitched. He did not believe that such an adhesion would be absorbed. After this adhesion was released she was well for the first time since the previous operation.

Dr. Joseph Price said that we all know that pus in the pelvis follows traumatism and particularly puerperal traumatism or filth, or that it follows some of those stab-wounds in criminal abortion. In regard to the absorption of the adhesions—why does it not take place in the healthy adhesions following a great number of sections in which we have to repeat the operation for ventral hernia? Adhesions once formed are exceptionally absorbed or released; and in this case, with fixed omentum and fixed bowel, he doubted very much if there were not some error in the first section.

Dr. George M. Boyd said that it seemed to him that we had inflammatory pockets and localized extra-peritoneal inflammation more often than is generally supposed, as the result of extensive cervical lacerations and the various tears of the vagina. This case seemed to be one of vaginal origin.

Dr. C. P. Noble agreed with Dr. Price that true broad-ligament abscess is rare, but it sometimes occurs. Dr. Joseph Price says that we do have suppuration in connective tissue in puerperal cases, particularly after criminal abortion. Of course this point has always been made. We have taken the position that in the great majority of cases the pus is in the tubes or within the peritoneum, but Dr. Noble thought that in the first enthusiasm of finding out that most cases of pelvic inflammation were not cases of pelvic cellulitis or true pelvic abscess, some took the exaggerated position of denying that we ever have cellulitis or pelvic abscess, and went a little too far; and for the sake of exact truth we must admit the existence of this condition. Why some adhesions were absorbed and others not, he did not know. It was impossible that he should have made a mistake in this case as he had his fingers on the adhesions.

Dr. G. Betton Massey reported a Case Illustrating the Treatment of Painful Prolapsed Ovaries in Young Girls.

The patient is a young lady of a sensitive, literary family, with an introspective bent. She menstruated early and, like many young girls, had painful periods. She was ill-developed physically and the periods were also irregular. The surgeon who was consulted is said to have diagnosed endometritis and uterine prolapse to a moderate degree, and a pessary was inserted. After the pessary had been worn for a little time it was removed, but not before it had caused great aggravation of the pre-existent condition. The case went from bad to worse, there were numerous consultations with physicians and surgeons, and removal of the ovaries and tubes was advised by several.

When seen by the writer, three years later, she was twenty-one years old. The uterus was in a condition of catarrhal inflammation, enlarged and tender; the ovaries, particularly the left, were prolapsed and very tender, although not enlarged. The position and painful condition of the ovary was, the writer thought, the condition which led so many surgeons to advise the unsexing of this young lady.

She was placed on rest, electrical treatment for her neurasthenia, and subjected to vaginal treatment by the galvanic current with a covered positive electrode. This resulted in a great amelioration of the tenderness of the left ovary. Up to this time the uterus had not been explored but, owing to the copious catarrhal discharge, a flexible aseptic sound was passed and the uterus found to be over three inches in depth, showing a greater source of trouble than the ovarian displacement. She was then put on the direct treatment for the endometrial inflammation with intra-uterine galvanic and faradic currents.

This was followed by marked improvement and recent advices state that she is entirely well, natural in her periods, and gaining flesh. The ovary still remains rather lower than the other but freely floating, and the writer thought that the slight deviation of position of that ovary would not cause any more trouble than a like freedom of movement of any of the other internal organs.

DISCUSSION.

Dr. George E. Shoemaker doubted if the patient's statements in the case of this kind should be accepted, and doubted very much if a girl giving such a history would go to several eminent physicians in this city and be told by nearly all that the ovary should be removed and yet be capable of cure by such slight treatment. He would remind Dr. Massay that increased length of the uterus need not go unsuspected until the sound be introduced. Bimanual examination will detect it more readily.

Dr. Charles P. Noble said he had never had a sick woman consult him who had been advised to have the ovaries removed and found nothing the matter. He thought that those who cast such imputations upon surgery should put themselves in a position to demonstrate that such things are true, and not take the statements at third or fourth hand.

Dr. Joseph Price said he often had patients, coming from a recognized operator, state that the doctor had recommended the removal of the ovaries; it was only necessary to ask a few questions to be able to tell the patient that probably the doctor was right; and in ninety-nine cases out of one hundred the examination showed that the physician was right. Dr. Massey makes a good point in regard to pessaries. Gynecologists know that it is important to correct displacements before using the pessary. The pessary is not to correct the displacement but to prevent its recurrence.

Dr. Massey stated that the surgeons were New York men. His authority was her physician, the patient herself and her sister. In justice to her previous attendants he would say that the case had been treated by conservative, non-electrical, methods before coming into his hands,

Elliston J. Morris, M. D.
Secretary.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting of November 23, 1892.

Dr. Wharton read a paper on "Treatment of Ischio-Rectal Abscess and Fistulo-in-Ano." (See page 965)

DISCUSSION.

Dr. Thomas S. K. Morton: I am glad that Dr. Wharton has insisted upon early operation in ischio-rectal abscess. This affection involves loose cellular tissue richly supplied with lymphatics, and may give rise to profound septicæmia, if not pyæmia, if not relieved early. I have recently heard of a case of small ischio-rectal abscess which gave rise to pyæmia and death. The incision should be made as soon as the brawny induration is evident, feeling certain that if there is any inflammation in this region, where the tissues are so poorly supplied with bloodvessels and other means of destroying septic material, suppuration will follow.

In washing out these abscesses with a strong antiseptic solution it is important to see that all that goes in, comes out, and that none enters the bowel, for a few drachms of a strong mercurial solution entering the bowel would give rise to poisoning.

The packing should be applied loosely. Here, as well as elsewhere, much damage can be done by too tight packing. There is something about iodoform gauze that makes it superior to every other material for packing. What this is I do not know, but under its use the dressing is drier, there is less pus, and the whole case goes on in a more orderly and rapid manner. I like also to rub iodoform into the walls of these abscesses and into the sides of a fistula. Peroxide of hydrogen is one of the best antiseptics in these cases.

In regard to the bowels, I have a predilection for keeping them loose in all operations about the rectum, and very early give such drugs as will produce partially liquid stools. This gets rid of the great pain and the terrible anxiety of the patient looking forward to the movement of bowels that have been constipated for several days after an operation.

Repacking is important, but in many cases simple inspection, particularly in fistula, is all that is necessary to see that

healing is progressing properly, and, if necessary, the wound can be painted with some stimulating solution, as a fifteen-grain solution of silver nitrate, balsam of Peru, etc. By careful watching, the painful process of repacking can often be avoided, although in some cases it will be required to secure uniform healing from the bottom.

Coming to fistulo-in-ano, we should bear in mind that there are two great varieties: one is the tubercular, and the other simple or traumatic, where a small foreign body perforates the wall of the rectum and sets up inflammation in the cellular tissue. Probably the ones that form slowly are simple, but may become infected with the tubercle bacillus. Granting that the large majority are tubercular, the treatment must be thorough and radical in order to get rid of the tubercle bacillus.

I agree with Dr. Wharton in regard to the use of the ligature, that only cases involving high section of the bowel justify that method. By this method we are apt to overlook the branches which are so common.

It is not always best to carry the director through the fistula and lay it open at once. It is sometimes better to dissect from the outer opening, treating the branches as they are met with, rather than to make the incision and have the field of operation obscured by blood.

The excision of the fistula has not proven a success. I have conversed with one or two men who had much to do with the introduction of this method, and they acknowledge that after using it for several years it has proved far less useful than had been hoped. There were but few cases in which excision could be done, and of these few, the majority suppurated, and the edges of the wound had to be separated.

In fistulas that are tubercular, and perhaps, in all, after thorough dissection and opening up all branches, I have wiped the the wound out with pure caustic potash. That stops the hemorrhage, it kills the lining membrane throughout, and perhaps some healthy tissue, but I think that we get a more radical operation, particularly in tubercular cases. We must, however be careful not to go too deep. After using the caustic potash it is well to carry over the wound a sponge saturated with vinegar, in order to stop the action of the alkali. The induration tissue can also be destroyed with the Paquelin cautery, but when this is used the surrounding tissues must be very carefully protected from the radiating heat.

There are scarcely any fistulas that cannot be benefited by operation. There are many that cannot be cured, but all that I have seen have been benefited. I can recall several cases that are going about with a small sinus running high up, but yet are remarkably comfortable when contrasted with their former deplorable condition.

Dr. A. J. Downes: Neither of the gentlemen has referred to multiple fistulas. I recently had such a case in a tubercular woman forty-two years old. During the past ten years she had had four ischio-rectal abscesses that had opened, and numerous other phlegomons that had not opened. I operated on her four weeks ago at St. Joseph's Hospital. I found four fistulas. On the left, two, one close to the externa sphincter, and entering the bowel behind the internal sphincter; the second, an inch and a quarter from the margin of the bowel and entering the bowel an inch and a half from the anal margin. On the right side there were two, whose external orifices were two inches apart, and an inch and a half from the margin of the bowel. In operating I cut through the left side at right angles to the sphincter, and on the other side made a wedge-shaped incision, extending above the opening in the bowel, including both fistulas. I expected to cut the sphincter, on this side at a subsequent operation. Sixteen days later I etherized and found that I had succeeded in closing the internal openings on the right side. I had thus succeeded in one operation in curing the four fistulas with but one incison through the sphincter, nor can I see why it should be necessary to even cut the sphincter twice in any case.

On two occasions in the office, I have used the rubber ligature for fistula in otherwise healthy people, with excellent results.

Dr. J. M. Baldy: I have been somewhat surprised at the small amount of space that Dr. Wharton has given to excision of fistulas and to the utter condemnation of that treatment by Dr. Morton. My experience has been so contrary to this that it may be of interest to mention it.

In past times I have treated fistulas by cutting and packing, and I have seen a number of cases in which non-control of the sphincter continued for a long time. I then gave excision a trial, and I have never in a single instance regretted its use. Nor have I had a single failure in the ten to fifteen cases in which I have employed it in the last two years. In simple fistulas I have slit open the fistula, and with curette, scissors, or thin-bladed knife removed the indurated tissue, and then have placed sutures buried completely around the fistula; and have finally closed the mucous membrane, from the bowel, with catgut sutures. Where there have been multiple sinuses I have cut out all partitions between the sinuses. In one case the opening was one-half to three-quarters of an inch in width. I rubbed in a strong antiseptic solution, obtained primary union, and a perfect result. I remember a case in Trenton on whom a perineal operation had been done by a friend. This was followed by an ischio-rectal abscess with an opening into the rectum. The lady was also suffering from hemorrhoids. I laid the fistula open, exposing a cavity that looked most formidable. The slit in the bowel was probably two inches long. I curetted the cavity, rubbed in a strong bichloride solution, taking one-half to three-quarters of an hour, closed the wound with sutures, which did not go within an inch of the bottom, whipped the bowel together with catgut, and closed it without drainage, at the same time removing four hemorrhoids. Ten days later I removed the sutures, and in another ten days the patient was up and about, and the opening closed.

As I have said, in none of these cases operated on have I had cause to regret excision, and I should prefer it to all other methods where it was possible to introduce sutures, and nearly, if not fully, bury them all the way round.

In all my bowel operations I keep the bowels open from the first, and after the first passage the patients do not have much trouble. They are more comfortable than if they are permitted to have semi-hard discharges passing over tender surfaces.

Dr. Wharton: I am glad that Dr. Morton has called attention to the importance of using the bichloride solution so that none of it is retained in the rectum. I cannot say why it is that iodoform gauze is so exceptionally good a dressing in these cases, but it is certain that it does better than any other material. I also use the powdered iodoform.

Practically the second dressing is not a repacking. I simply pass a piece of gauze to the bottom of the wound and allow it to project between the edges. I have also used the method referred to by Dr. Morton without repacking.

I use the caustic potash in many cases, particularly where the walls of the sinus are very dense, but neglected to mention it in the paper.

In the chronic cases that have been operated on many times, I think that the great secret of treatment is thorough curetting and free drainage. If the sinus can close so that pus can accumulate, the patient suffers. If the drainage is free the patient is more comfortable.

In regard to double fistula, I spoke of this under the head of horseshoe fistula, and recommended one division of the sphincter at a time.

Dr. Baldy's results has been very satisfactory. I have myself not had a very extensive experience with excision. I meet with many cases in which the operation could not be satisfactorily accomplished, and in these I prefer incision.

If the bowels are moved promptly after the operation it is apt to disarrange the packing, and sometimes the first packing is important in controlling hæmorrhage from the wound.

MILWAUKEE MEDICAL SOCIETY.

Meeting of November 8th, 1892.

Dr. Lewis G. Nolte, Milwaukee, presented a "Report of Two cases of Nephrectomy—Recovery."—(See page 956).

DISCUSSION.

Dr. A. H. Levings: This paper of Dr. Nolte's I have been very much interested in. There are some points in it that might be well discussed, I think. In regard to the use of the aspirating needle, I believe in the majority of cases a diagnosis can be made without it; that is we can easily make a diagnosis of pus in the urine; but I believe also in the majority of cases, in fact nearly all, with the microscope if the

pus comes from the kidney you find the peculiar characteristic cell formation. Also if the abscess has extended into the kidney that you may get the cells of the different tubes. If the pus comes from the bladder wholly you will get the characteristic bladder epithelial cells. The rule is, so far as I know, in the microscopical examination of these cases, that if the pus comes from the bladder or from the kidney the cells characteristic of the source will predominate. Of course you always have more or less cystitis in cases of suppurated kidney, but if the pus comes from the kidney, and you are so to diagnose it, the cells must predominate over those of the bladder.

Whether to remove the kidney in the primary operation or not is a question. I think the majority of operators, Shape for instance, are very strong on this point—that unless you are sure that the abscess is tubercular the kidney should not be removed, but simply incised; see if you cannot save it and if the abscess will not heal. The majority of these cases are undoubtedly tubercular. I believe that is the case. And a tubercular kidney if it can be removed had better be removed.

In the removal of the eleventh or twelfth rib or both, as a rule, I think, that it is not intended in these cases to extend the incision up to the point of the ribs but the object is simply to get more space for retracting the wound. It is well known that the pleura extends half an inch below the twelfth rib, but by resecting the twelfth rib, you can open the wound further.

Dr. Nolte: I would say that finding out where the pus comes from does not tell us at all the vital point. It does not tell us which kidney is involved, and that is the most important point and that is where the aspirator should be employed. Why not operate on tubercular kidneys? I think the rule is as set down by S. W. Gross that you should operate in primary tuberculosis. I find from the literature that pyonephrosis is the rule and primary tuberculosis is the exception, contrary to the view apparently taken by Dr. Levings.

Again as to the point of the pleura extending below the twelfth rib, that is only once in a while the case. The rule is it does not extend further than between the eleventh and twelfth ribs.

Dr. H. M. Brown: I am quite astonished to hear Dr. Levings express himself as he has in the matter of the use of the aspirator. I do not see any good reason why you should not use the aspirator. It does not do a particle of harm—it cannot do any harm—and it gives you a certain means of diagnosis providing you have no better means at hand, I mean the method of seeing the character of urine coming from the different kidneys—and even then why should you not use the aspirator. One of the most prominent surgeons of the United States, Dr. Senn, was remarkably fond of using the aspirator and more than half of his diagnoses in regard to the extent or character of tumors was made with the aid of the aspirator needle, and I think if he were to tell the truth, as I am inclined to think he does as near as any of us do, that has helped him more than anything else. In the cystoscope a man has at hand a method of making an absolute and extremely early diagnosis as to which kidney is affected and how much. After once or twice using it, the urine can be seen trickling from the ureters into the bladder and can be seen uniting, when pus is coming from one kidney and clear urine from the other, with as sharp a line of demarkation as exists between the muddy waters of the Missouri and the clear waters of the Mississippi; and such means for diagnosing which kidney is afflicted, is certainly a most valuable one. It is a far prettier picture than the one I have spoken of, and I think it would be a very good plan for the gentlemen who have cases under their charge in which they suspect abscess or cystic pyosis, or degeneration of either kidney, to employ the means suggested for diagnosis. They may borrow my instrument and try it.

I was also astonished to find that Dr. Levings, unless I misunderstood him, thought it was not a good plan to operate on a tuberculous kidney. I do not know why we should not operate as quickly on that as on any tubercular cavity. Tubercular material is essentially a foreign body, and I see no reason why we should not operate at once on tuberculous kidney tissue, early if we can, late if necessary. Because a man has a few nodules in his lungs you should not hesitate to remove tuberculosis of the elbow or knee-joint. Why not remove the affected part as early as possible? And I think the consensus

of opinion, as far as my experience goes, is in favor of early and late operation upon tubercular diseases of the kidney.

Again, Dr. Nolte is more than right when he claims that the majority of cases of pus destruction of the kidney are not tuberculous. There is not one of us here who has not had in his post-mortem experience almost numberless instances where one kidney was almost entirely destroyed from the presence of stone and cystic degeneration of the kidney, which at some time had been an acute inflammatory trouble accompanied by pus and all the symptoms of pus infection, chills, fever, etc., and which if the kidney had been operated on and nephrotomy had been made, the kidney itself, or at least a greater part of it, might have been saved for further use; the cause of the trouble and some of the kidney would have been removed and a useful kidney would have been spared to the patient. In conclusion it seems to me that such grounds as Dr. Levings has taken in regard to the treatment of a majority of these cases should be avoided.

Dr. Levings: Dr. Brown has entirely misquoted me. What I said is that a tubercular kidney should not be drained, it should be removed—if I did not, that is what I intended to say.

Dr. Nolte: I would say in conclusion that my cases were both so far advanced that neither the cystocope nor any other means of determining from which kidney the trouble proceeded, was necessary. I had a tumor in each case and had no hesitancy in using the aspirator needle.

One of the most beautiful methods I ever saw employed was by Sabine in New York, in a case of Dr. Weir's. He introduced his hand into the rectum up to the sigmoid flexure and compressed the ureter. He could very easily compress either one of the two ureters at will, and in the mean time the urine which had secreted in the bladder was collected from the other kidney which secretes at the rate of a few drops every few minutes and a diagnosis was made out very easily. This was a case in which there was no tumor whatever and in which Dr. Weir subsequently operated and brought forth a kidney that was riddled with abscesses.

Dr. A. J. Burgess: I think Simon, of Heidelburg, was the man who first employed the method of introducing the hand into the rectum for the purpose of diagnosing kidney trouble; but it was found after he had used it awhile that the rectum was in such a dilapidated condition that it was not considered a very practicable method. A few rents with a few cases of death from peritonitis were the result.

In regard to the diagnosing of kidney troubles where there is a great deal of cystitis, by the use of the microscope, I must confess I have been pretty cloudy on the subject. I have a case now under torture, where I have examined the urine a good many times. I have found cells which one would ordinarily suppose came from the kidneys, but this case has been one of cystitis of three years' standing, and of course there has been a great deal of inflammatory trouble in the bladder, and the small cells from the new layers of epithelium in the bladder oftentimes are so like those in the kidneys that it certainly takes an expert to know the difference; and then supposing you have the trouble arising from a stone which has become impacted in the ureters—what good are you going to do with your microscope? You may perhaps have trouble with the bladder also; the ureters may be stopped up and no urine or but very little coming down and that intermittently; you are at sea again. You may think you have cells which come from the kidney which really did not because they could not.

In regard to the use of the cystoscope, if we were going to borrow Dr. Brown's, I should want to borrow Dr. Brown also. The statements I have heard in regard to the cystoscope are entirely at variance with Dr. Brown's statement; and Finger, of Vienna, says it is much harder to learn to use than is the ophthalmoscope and much more uncertain in its results. Dr. Dietel, seventy-four years of age, and a specialist on genito-urinary diseases, used the cystoscope at first for a good while, but practically only to make demonstration of its use rather than to make diagnoses with it. He thinks that the ordinary symptoms and the experience he has had, will lead him to more correct diagnosis ordinarily than will the systematic use of the cystoscope. That instrument was used considerably two years ago, and I remember one man who was quite an enthusiast who had discovered an instance of stone by the use of the cystoscope and another instance of

tumor; but on opening the bladder to remove them there was nothing found.

The method of catheterizing the ureters also has been used to some extent; and in that connection I remember to have seen Eberson, of Copenhagen, trying to catheterize the ureter in a woman and he worked at it an hour and finally got the catheter into the uterer but no urine ran out. He drew it out and found it was plugged with a clot. He "monkeyed" around for an hour and got it in again but it plugged right up again with another clot. And, after an hour and a-half the ureter had to be incised to admit his finger. Of course in the male the operation is still more difficult.

In regard to the removal of tuberculous kidneys, it would be a very good thing to do always, of course, if you could be absolutely certain there was no such trouble in the other kidney. There apparently is no reason theoretically why one kidney should be infected much sooner than the other. Of course it does so happen often, but oftentimes the affection is coincident, and there is no way of being absolutely certain in regard to it. So some operators have been in the habit of doing first a nephrotomy to see if that would perhaps relieve the patient, and, if not, and the other kidney was found to be in good condition, later, through watching its functional activity, a secondary nephrectomy could be made. Practically it is difficult to do that on account of the large amount of scar tissue that is apt to form.

In regard to the resection of the ribs, I have seen that done once only and it seemed to me that there was no space whatever gained by the resection; at least it brought the operator to no result and did not seem to give any more room in the place where room was wanted than he had before.

Correspondence.

CATHETERISM IN THE FEMALE.

Editor of The Medical and Surgical Reporter:—My attention has been called to this subject by remarks made on the style of catheters to be used in the female subject, on page 908 of Medical and Surgical Reporter, of December 3d, '92. The most frequent use I have found for catheterism in the female is previous to and during the first stage of labor, especially in *primiparæ*. During a long, varied and quite extensive practice as a country obstetrician I invariably examine the suprapubic region in order to ascertain whether or not the bladder is full. I claim that it is not at all uncommon to find the viscus distended with urine, which in my opinion is caused by partial paralysis of the constrictor muscles at the neck of bladder superinduced by pressure of the gravid uterus, and in *primiparæ*, a general compactness of the pelvic ligaments, bones and tissues. I agree with commentator in the article above referred to that "the straight tube is preferable to the curved one in women." It is easier of introduction, more thoroughly aseptic, and foreign matters are more easily eliminated through it. Another advantage is that it can, if not too long, be introduced in *almost* any position of the patient. I have never used a glass catheter, but can see no particular advantage in them. The one I have found most convenient is Tiemanns' soft rubber catheter stiffened *for introduction*, with a wire. I always use a No. 10 or No. 12. I often use a gum elastic catheter which is always destroyed when no longer needed. The same catheter is never used in two subjects. Another point is that after using them I always clean my catheters by placing them with other instruments in a hot solution of carbolic acid, forty per cent. and allow them to remain in it for about a half an hour. I have never, in these cases, used the double current catheter. At some future time I shall have more to say on the subject of catheterism in the male.

Respectfully yours,

A. O. Stimpson, M. D., C. M.

Thompson, Pa. Dec. 7th, 1892.

CATGUT AS SUTURES.

Editor of Medical and Surgical Reporter:—In your issue of Nov. 12, there appears an abstract of a paper originally published by Klemm, in the *Bulletin Generale de Therapeutique*, in which strong condemnation is made of the use of catgut in surgical practice. From an extensive experience, both experimental and clinical, I am sure the deductions of Klemm are absolutely false and therefore misleading. Soon after the publication of

the paper in question Dr. J. F. Binnie Professor of Surgical Pathology in the Kansas City Medical College, and myself undertook some experimental work to determine the comparative value of catgut, silk, silver wire, silk-worm gut and kangaroo tendon—particularly as regards the setting up of suppurative or other infectious processes in wounds. The results conclusively prove the inaccuracy of Klemm's observations, provided sterile gut is used under perfect aseptic conditions.

As to the statement of Klemm that "when catgut is employed in surgery suppuration occurs in spite of all precautions," I knew from long experience that it was not true, but decided to make a careful series of observations, assisted by Dr. T. B. Thrush, House Surgeon at All Saints Hospital, Kansas City. So during the past few months close watch has been kept on 8 cases of trephining for idiocy, epilepsy, tumors of brain, etc.; 9 laparotomies for pyosalpinx, ovarian tumor, etc.; 4 abdominal hysterectomies; 2 gastrostomies; 4 recent perineorrhaphies; 1 removal of the Gasserian ganglion; 2 excisions of the ankle; 4 amputations; 1 Wyeth's amputation at hip; 2 club-foot operation in which excision of bone was made; 3 excisions of cancers; 3 herniotomies; 2 varicoceles; 1 trephining the spine; and 2 castrations. In cases of cystotomy, prostatotomy, excisions of ribs, amputations for injury, operations on the rectum, the perineum, etc., no attempt was made to use catgut since the field of operation could not be rendered aseptic. In the 48 cases here mentioned more or less pus formed in three cases: (1) a case of tuberculous empyema of the ankle; (2) in an amputation where carbolized gut had to be used instead of juniper-oil gut; (3) in the laminectomy for extra-dural tumor producing paraplegia, when the incision was through a large bed-sore not properly cleaned. The remaining 45 cases completely annihilate the anti-catgut men—there is no way of escape.

Any surgeon who will take the pains to clean his field of operation by carefully scrubbing with soap and brush, drying, washing with sulphuric ether, applying a saturated solution of permanganate of potassium until the parts are stained a deep mahogany color, decolorizing with a strong solution of oxalic acid and finally douching with solution of bichloride of mercury, will have a surface upon which he may use as much catgut as necessary without the slightest fear of suppuration, providing the hands are thoroughly disinfected by the same process, all instruments boiled for 20 minutes in a 5 per cent solution of carbonate of sodium just before using, and a good catgut be employed. Carbolized catgut is unreliable, even dangerous: juniper-oil gut, properly prepared, is absolutely safe.

Very truly yours,

EMORY LANPHEAR,

Kansas City, Mo. Dec. 6, 1892.

STERILITY IN THE MALE.

Dr. L. Seeligmann states that matrimonial sterility caused by the husband may be due to the following causes:

1. Impotentia coëundi.
2. Aspermatism.
3. Azoospermia.

Of these three causes of male impotency, the comparatively rare condition of impotentia coëundi, and the almost equally rare condition of aspermatism, we may pass by and proceed to a consideration of azoospermia as the most frequent cause of sterility, or rather impotency, in the male.

Azoospermia, or a change in the ejaculatory fluid in which both quantitatively and qualitatively the semen is apparently normal, but in which the most important element, the spermatozoa are absent, can be caused by the following:

1. Stoppage of the vasa deferentia in consequence of inflammation or traumatism.

2. Nutritive disturbances of both testicles:

a. Occurring after funiculitis, epididymitis, and duplex orchitis.

b. From constitutional diseases; syphilis, tuberculosis, chronic alcoholism, diabetes mellitus, etc.

c. From varicocele, hydrocele, kryptorchismus.

3. Atrophy of the testicles:

a. After sexual excesses.

b. After long indulgence in onanism.

c. After injury to certain parts of the brain, especially of the cerebellum.—*Weekly Med. Review.*

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THE MEDICAL AND SURGICAL REPORTER.

SATURDAY, DECEMBER, 17TH, 1892.

SOME SIGNS OF THE TIMES.

"If the profession is to rise in the estimation of the public, the portals must be narrowed, and the evidences of the capability for entering a highly honorable and terribly responsible profession must be made more and more stringent. The neophyte must not only know, he must be able to put his knowledge into practice before he is let loose to command the issues of life or death. And I hold there is no plan surer to bring about this condition of things than to set the learner to try to do the work for himself, as is the almost invariable rule in every line of life, under proper and responsible supervision."

This is the conclusion of a strong letter from Dr. Bruce, Direct Representative for Scotland on the General Medical Council, to the *British Medical Journal* (Nov. 26 '92). He is urging the necessity of higher education in the medical profession of Great Britian. In that country, with its profession jealously supervised by a General Medical Council of great powers, with that insular tendency to introspection yclept conservatism, with its ancient and honorable institutions of learning, no sooner has the five years' curriculum been established than the cry is made to raise yet higher the standard of the profession.

In painful contrast to this an editorial in *Daniel's Texas Medical Journal* (Nov. '92) affords an illustration of a standard of medical education that will meet legal requirements in some parts of this country. Unfortunately the illustration could apply to the majority of the States and Territories of the Union,—even to Pennsylvania. Speaking of the mortifying lack of success of the Texas Medical College, the editor says:

A magnificent building was constructed, and every department thoroughly equipped for teaching modern medicine. An able faculty was secured, and a high and thorough curriculum was arranged, extending over three years' graded courses. No longer should it be a reproach to Texas that with her princely school fund and her university, where all else is taught, her sons were compelled to go abroad for medical education. After ever so many obstacles overcome, at last the doors of a magnificently prepared medical college were thrown open and students were invited to come in. They didn't come. * * *

Let it be understood that in this State a *diploma* is a *diploma*. There is no discrimination observed whatever, and practically one diploma is as good as another. A man who can go into almost any Southern city, and after three months attendance on lectures, return to Texas and begin practice; or who can go, it may be, without intermission, from a three months' course at a winter school (which has cost him, say $50 for tuition), right into a summer school, where after three months more and another $50 fee, he can secure a diploma which will entitle him to recognition by the profession and all the rights and privileges of a legal practitioner of medicine in Texas, can hardly be expected, in these days, to sacrifice so much to patriotism as to attend three years at a home school and pay $140 each year unless, thereby, he could secure a diploma which would give him certain advantages over the cheaper sort; in brief, Texas cannot expect to keep her students at home so long as a diploma from a two

year school and $50 fees is put upon the same footing before the law. * * *

Every effort to secure legislation which will require something more than the mere possession of a diploma (from any source) as a requisite to the privilege of practicing medicine in Texas, has been laughed to scorn. And now, the senators who mocked those efforts are confronted with a problem hard to solve, and they must take their choice between keeping up a costly establishment and paying a teaching corps high salaries to lecture to empty benches—or they must offer Texas students other inducements, or protection from competition with cheaply made doctors. The first thing to be done, in our opinion, is to reduce the cost of lectures to the matriculation fee and anatomical fee only. If then our five hundred students still refuse to be highly and thoroughly educated, pass a law which will admit to practice in Texas no man whose diploma has been issued by a school requiring less than is required at Galveston.

However, the situation is not so hopeless as if relief were entirely dependent on the Legislature. Experience has constantly shown that, in the onerous duties of saving the country, the law-makers can spare but little time in considering matters in which they can discover no prospects of immediate beneficial returns. Only by patient and persistent effort can they be educated to an appreciation of the importance of allowing none but men of the highest grade of ability and education to deal with issues of life or death among their families and friends.

Six months' attendance on lectures (!) and $100 will obtain a diploma in "almost any Southern city,"—a condition of affairs not confined to Southern cities. A bitter caricature of American Medical Science.

Southern practitioners are fully alive to the situation. In some States, notably Virginia, they have secured legislation which will go far to extirpate the reproach of "diploma mills." But impatient of the tedious process of law-making they have devised a method which will greatly hasten the growth of public opinion necessary to compel the desired legislative action, meanwhile working mightily to advance medical education.

In a private letter, Dr. Luther B. Grandy, editor of the *Atlanta Medical and Surgical Journal*, who has been actively identified in the movement, says "Some of us down here have been engaged in proclaiming the gospel of a higher education, and recent events encourage us to hope that our labors will not be in vain. The Southern Medical College Association was inaugurated the other day and many of the evils which have existed heretofore in our educational system we are persuaded may now be corrected. We propose to keep up the fight until the desired results are obtained, or at least until better conditions prevail than at present. The improvement in our system of medical education down here, the lengthening of our terms, the increased requirements both for matriculation and graduation, is a consummation devoutly to be wished. This will give us better schools and better doctors." These are the sentiments of all of the progressive men in the South, and the influence that will be exerted by the association will rapidly make itself felt throughout the entire section. We give below a schedule of the organization of the Southern Medical College Association.

RULES AND REGULATIONS

FOR THE ORGANIZATION AND MAINTENANCE OF THE SOUTHERN MEDICAL COLLEGE ASSOCIATION.

This Association shall be composed of delegates from Southern Medical Colleges, whose Faculties have signified a desire to become members thereof, signed these rules of organization, and paid the membership fee of $5.00.

The objects of the Association are to cultivate closer and more intimate relation between medical colleges and to elevate the standard of Medical Education by requiring a more thorough preliminary training and an increased length of medical study.

The Association shall be composed of one or more delegates from each Medical College, belonging thereto, who shall be elected annually by their respective faculties. Each college shall be entitled to one vote in the transactions of the Association.

The officers shall consist of a President, Vice-President, Secretary and Treasurer, who shall be elected annually, just before the adjournment of the annual meetings, and shall perform the respective duties, pertaining to these offices in similar organizations.

The meetings of the Association shall be held at the same time and place of the meetings of the Southern Surgical and Gynecological Association, unless otherwise determined by the Association.

REQUIREMENTS FOR MATRICULATION.

Every student applying for matriculation must possess the following qualifications:

He must hold a certificate as the pupil of some known reputable physician, showing his moral character, and general fitness to enter upon the study of medicine.

He must possess a diploma of graduation from some literary or scientific institution of learning, or certificate from some legally constituted High School, general Superintendent of State Education, or Superintendent of some County Board of Public Education, attesting the fact that he is possessed of at least the educational attainments required of second grade teachers of public schools. Provided however, that if a student so applying is unable to furnish the above and foregoing evidence of literary qualifications, he may be permitted to matriculate and receive medical instructions as other students, and qualify himself in the required literary departments, and stand his required examinations as above specified, prior to offering himself for a second course of lectures.

The foregoing diploma or certificate of educational qualifications, attested by the Dean of the Medical College attended, together with a set of tickets showing that the holder has attended one full course of medical lectures, shall be essential to attendance upon a second course of lectures in any college belonging to this Association.

BRANCHES OF MEDICAL SCIENCE TO BE INCLUDED IN COURSE OF INSTRUCTION.

Anatomy, Physiology, Chemistry, Materia Medica and Therapeutics, Theory and Practice of Medicine, Pathology, Surgery, Obstetrics and Gynecology, Hygiene, Medical Jurisprudence (Forensic Medicine) and special Laboratory work as hereinafter provided.

QUALIFICATIONS FOR GRADUATION.

Candidates for graduation in addition to the usual requirements of Medical Colleges, must have attended three courses of lectures of not less than six months each in three separate years:

Must have dissected in two courses, and attended two courses of clinical or hospital instructions.

And must have attended one course in each of the special Laboratory departments to wit:

1. Histology and Bacteriology.
2. Chemistry.
3. Operative Surgery.

These requirements shall not apply to any student who has received a course of medical lectures prior to September 1, 1892.

M. T. Briggs,
J. B. Marvin,
J. S. Cain. } Committee.

The . . . . . of . . . . . agrees to the above regulations and thereby becomes a member.

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CHRISTOPHER (W. S.) ON RETAINED FÆCES.

The following conclusions are submitted:

1. Long continued partial retention of fæces is common.
2. Such retention is usually harmless.
3. Retained fæces undergoing putrefaction may, at any time, acquire poisonous properties.
4. Retained fæces may produce either local or constitutional symptoms.
5. The principal local conditions produced by retained fæces are typhlitis, appendicitis, and peritonitis, either localized or general.
6. Retained fæces, through the poisons produced in them, are capable of causing any constitutional symptoms which can be manifested through the agency of the central nervous system.
7. Among the toxic effects of such stercoræmia may be mentioned fever, convulsions, coma, insomnia, headache, neuralgia, vertigo, anæmia, diarrhœa, constipation, incontinence of urine and fæces, insanity, etc.—*Journal American Medical Association.*

Translations.*

By MARIE B. WERNER, M. D.

Dr. J. G. Master of Kiew, (*Jahrbuch f. Kinderheil 34, 1892.*) earnestly recommends the use of phosphorus for rachitis coincident nervous phenomena, he prefers the oil of sweet almonds rather than Cod Liver oil as a menstruum.

℞ Ol. Phosphorat offic. (1:80)..... gtts. x.
Ol. Amygdalæ dulc. 13
M. Sig.—10 drops once or twice daily for children of 2 to 3 years.

Dr. Karl Gebb (*Inaug. diss. Würtzburg, 1892*) presents the clinical history of 21 patients suffering from benign neoplasms of the larynx, observed by him at different clinics.

Seven cases of fibroma; these were usually isolated and located on the free border of the vocal cords, between their anterior and middle thirds—the age of the patients ranged between 24 to 48 years.

In 9 patients aged respectively between 10 to 64 years cysts were observed on the epiglottis, the arytenoid and pharyngo-epiglottidean folds and the vocal cords. In only two of these cases, hoarseness as a symptom, led the physician to make a local examination, the other were casually found in making examinations. Angioma was found once, in a man of 65 years who had been hoarse for one and one-half years previously. It was located in the R. sinus morgagni.

Four cases of papilloma (in two men and two children.) One of the children died shortly after tracheotomy had been performed from pneumonia.

In the three other cases numerous returns were observed after removal by either the endolaryngeal method or by the laryngo fissure.

Falkenheim and M. Askanazy (*Jahrbuch f. Kinderheil 34, 1892*) reports a case of perforative peritonitis in the newborn with calcareous degeneration of the extravasated meconium. The child born by the breech, with subsequent extraction of the head, showed marked tympanitic distension of the abdomen. A puncture made five days after birth was followed by the escape of large quantities of gas, affording temporary relief but cyanosis and death occurred on the twenty-third day. The most prominent symptoms were vomiting and eructations but apparently no abdominal tenderness.

Post-mortem examination revealed a large quantity of gas in the abdominal cavity, the peritoneum was covered with a fibrinous coating undergoing suppurative changes, numerous small nodules were noticed principally in the region of the flexura coli sinistra. At this point the colon presented a funnel-shaped depression having at its deepest point an opening the size of a pin's head. The hard nodules contained calcareous matter. After dissolving these calcified particles examination showed that they contained epithelial cells, cholestrine, bilirubin and isolated hairs, this proved the nodules to consist largely of calcified meconium. The authors deduct from this that the perforation occurred at a time when the intestine contained only meconium, but after birth, the meconium containing bacilli; this he considered to be the cause of the peritonitis.

Von Dübler and Genserich have described similar cases.

Dr. G. Dittrich (*Deutsch Zeitsch f. Chirurg.*, 33, 1891) has contributed an interesting article on the subject of "Statistics of Mammary Cancer."

The material which has furnished subject matter for his studies was derived from the Strassburger Surgical Clinic. During this time 110 cases of mammary carcinoma were seen; 107 among women—three among men. The author received definite answers from eighty-two of these in making his inquiries. Ten died at the hospital and were examined post-mortem.

The ages of the patients ranged mostly between forty-six and fifty years.

As aids to the cause D. recognizes on the one hand the absence of the physiological activity of the gland, or, again an over-stimulation of its functions.

In twelve cases mastitis preceded the malignancy, six times in the gland so affected, five times in both mammæ and once in the healthy breast. In ten cases trauma acted as an immediate causative factor. In three cases eczema and fissures were noticed. Six patients gave a distinct history of heredity.

*Translated for Medical and Surgical Reporter.

Anatomico-pathological investigations proved the scirrhus variety the most frequent.

In seventy-eight cases the integument was infiltrated and involved; only in seventeen the skin remained free. In seventy-one females the axillary glands were found infiltrated; in twenty-four they were intact. The tumor was adherent to the pectoralis major in twelve cases and in eighteen its surface was ulcerating.

In ninety-eight cases the total amputation of the mamma and thorough clearing of the axillary space was practiced—only twice was the tumor alone removed, both live still, one eight years, the other five and a half years since the operation, with no signs of return. Five patients were inoperable. The returns which presented themselves after the operation were removed in thirteen patients.

Of the 104 operated cases, there were eight deaths. Of the ninety-five discharged cured, eighty answered the written communication; 23=28.7 per cent. were still alive. Thirteen can be regarded as cured, 16.3 per cent., by this the author means no return since within the space of three years. In nine of these, four to ten and a half years have elapsed since the operation.

Of the three male patients, one died of erysipelas; one died two and a half years after operation of pneumonia; one had a return which was removed, the patient was then lost sight of

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"A Contribution to Internal Surgery," by Prof. Edin Rose (*Deutsch Zeitsch f. Chir.* 34, 1892). The author has for the space of nearly 30 years, studied the question of symptoms of rupture of the stomach as a result of gunshot wounds, and internal injuries.

In the last two years Rose has had the opportunity of performing cœliotomy in two patients suffering from such an injury and presents now the interesting history of his patients.

Male, æt. 20, fell from the roof of a three-story house and sustained a severe concussion of the brain and fracture of the skull together with other injuries. He vomited twelve times dark colored blood during the first two days.

The abdomen was much distended, sensitive laterally and dull on percussion. Rose thought of possible rupture of the intestines, but desisted from performing an operation because the patient was unconscious and later because there was a normal discharge of natural colored feces. The patient was discharged after two months, apparently in good health, but returned a month later suffering from ileus. A mechanical obstruction seemed to be the cause and Rose advised laparotomy. An abscess of the liver was found occupying almost the entire left lobe, adherent to the stomach and indirectly to the transverse colon—the increase of this abscess formed the stenosis from which the patient was suffering, its evacuation and fastening the abscess walls to the incisions, resulted in recovery.

Second case: The patient, aged 24 years, was thrown out of a freight car, and fell with his left side upon the sharp edge of a board fence. Vomiting the contents of stomach mixed with blood, at once set in, and was promptly followed by vomiting of clear blood. One finger's breadth above the umbilicus could be seen or felt a depression, above this the abdomen was seen bulging forward containing liver, spleen and stomach, but in this swelling their outline could not be distinguished by the percussion note. On the 14th day, a section was performed and a rupture of the pancreas and posterior wall of the stomach. Through the rupture of the stomach the remainder of its contents had entered between the omental layer, making a tumor between the pancreas and stomach. The blood and pancreatic juice aided to produce an inflammation in this sac, by which the foramen of Winslow was closed. This case also recovered.

These two cases have taught the author to regard the continued vomiting of blood after injuries from a previously healthy stomach, as a pathognomonic symptom of rupture of the stomach.

Injuries to large venous trunks treated by lateral closure. Dr. Niebergall, of Marburg (*Deutsch Zeitschr f. Chirurg.*, 23, 1892). The various methods taught at Kuster's clinic, for the arrest of hæmorrhage in injuries to large venous trunks are: first, *compression*, sometimes *tampon*. Second, *lateral ligature*. Third, *suturing the vein*. Fourth, *lateral compression by means of forceps temporarily left in situ*. The experience of Niebergall by compression or tamponing in minor injuries to

venous trunks is, that this method often produces union minus any great reduction in the calibre of the vessel. More extensive injuries however require a different course of treatment, since there is little hope of retaining its lumen, as well as the possibility of non-arrest of hæmorrhage; this is especially true of such veins as the femoral where the collateral circulation is not so fully developed.

In bleeding from eroded veins the antiseptic tampon may prove of service.

Lateral ligature has proved successful in Niebergall's hands with, however, some diminution of the lumen of the vessel at the space ligated which increased in direct ratio to the amount of venous wall enclosed in the ligature. The objections to this method are: primary hæmorrhage due to the ligature slipping, this is often prompted by an unavoidable shortening of the vein in its ligation, this danger is less when the wound has occurred at a place where another vein joins it. Any abnormal or pathological changes of the walls of the veins, frequently favor the cutting through of the ligature.

Suture of the vein. Niebergall reports ten cases collected from medical literature. From these he forms the following conclusions: This method is peculiarly adapted to injuries in the long or transverse axis of the vessel, and the results have been superior to those of the former method, since there is less danger of primary hæmorrhage, and the lumen of the vessel is not so much diminished, the adaption of the wounded edges promises better and more lasting results. Two important points must enter into the consideration for the use of this method, in order to attain the above results, i. e., antisepsis, and healthy venous walls.

Lateral and total compression by means of forceps left in situ:—Niebergall reports fifty-three cases, and gives the following conclusions: This method is thoroughly reliable and in the presence of strict antisepsis, gentle and careful removal of the forceps after twenty-four hours, secondary hæmorrhage seldom, if ever, occurs; the lumen of the vessel is retained, since the forceps favor adhesive union of the inner coat, which is of sufficient firmness to hold until complete cicatrization has taken place, this usually occurs in about fourteen days. The author prefers to use Pean's forceps.

Dr. Passet, of Munich, (*Munch. Med. Woch.* No. 32, 1892) presents under the head of, "Legal Responsiblity of the Physician Administering Chloroform or Other Anæsthetics," the following rules for its safe administration, based upon his own experience and that of others: (1) A thorough knowledge of the general health, condition of the circulatory and respiratory organs is imperative. The urine should be examined. An injection of morphia should precede operations of longer duration. This will diminish the quantity of chloroform necessary. In organic disease of the heart, a combination of ether and chloroform, or ether is to be preferred, and lastly, local anæsthesia is to be preferred in smaller operations,—the use of bromide of ethyl; (2) in cases where grave changes are present in the circulatory or respiratory organs, or if asphyxia is present through obstruction in the air-passages, anæsthesia is not admissible; (3) chloroform should never be administered during digestion; artificial teeth should be removed; the patient placed on his back during the early stage of narcosis, to be changed later as needed; (4) only chemically pure chloroform should be used; (5) chloroform should always be given with sufficient air; it should be used in drop doses; any apparatus which combines chloroform with a proper amount of air is to be recommended; (6) during the operation it is imperative to watch the circulation and respiration. If possible the pulse should be recorded by an assistant; arrest of heart's action, or asphyxia must be treated promptly; (7) when complete narcosis has set in, small quantities at longer intervals are indicated.

The physician can only be held responsible for untoward results if any of the above directions have been overlooked.

Kronfeld reports a case of poisoning by antifebrin taken with suicidal intent. (*Wiener Med. Woch.*, No. 38, 1892) Male; æt. twenty-four; swallowed twelve grammes at one dose. He at once became drowsy, and soon marked cyanosis set in. Injections of ether and lavage of the stomach with cold water revived the patient, and in a few days he recovered. The antifebrin was eliminated chiefly in the urine. The temperature was persistently low.

Abstracts.

TUBAL MOLES.

In the *Lancet*, November 12th, Dr. Bland Sutton, of London, gives an interesting illustrated article upon this subject. He says, in part:

Tubal moles differ from uterine moles in several particulars—indeed the points are such as to enable us readily to tell one from the other.

The uterine mole is more or less spherical; the amniotic cavity is of fair size and occupies the center of the mole. The embryo may, or may not, be present. Sometime s it is represented merely by an ill-shaped mass pendulous at the end of the cord. Even when the embryo can be recognized it is very misshapen, and the umbilical cord is often œdematous.

A tubal mole in its early stage is spherical, but, after attaining the dimensions of a walnut, becomes ovoid. In the majority of cases the amniotic cavity occupies an excentric position. In consequence of this peculiarity the thin amnion is easily ruptured and permits the escape of the embryo. This explains the difficulty of finding the embryo in many cases where the mole has been discharged through the rent in the wall of the tube or aborted through an unclosed ostium, accompanied, as the rule is in these cases, with free hæmorrhage. The mole is easily found in the clot, but if the embryo has escaped from the amniotic cavity the chances are that it will not be recognized. It must not be imagined that because the embryo has not been found it has been dissolved by the peritoneum. On one occasion I collected all the blood and clot which I removed during an operation five weeks after the rupture of a gravid tube, and disintegrated it by a gentle stream of water. In the course of this manœuvre the embryo came to the surface, was recognized and caught. As is the case with uterine moles, the embryo sometimes dies very early, and the amniotic sac contains nothing but a small quantity of fluid. When the mole, on its escape from the tube, is discharged between the layers of the broad ligament it becomes so compressed that the embryo is found flattened out like a succulent flower firmly squeezed between the layers of a heavy book.

It will be necessary to offer a few remarks on the recognition of a tubal mole. When a mole is found with an embryo in the amniotic cavity there cannot be any room for dispute. The same holds good for moles with amniotic cavity, though no embryo is present. In hard firm clots in which the amniotic cavity is not recognizable, sections from the supposed mole must be prepared and examined with a microscope for chorionic villi. The presence of chorionic villi are as indicative of a mole as of the presence of an embryo. These villi are such characteristic structures that they cannot be confounded with "half-organized blood," as some writers have suggested.

It is of great importance to appreciate clearly the character of a tubal mole, for the presence of a mole is decisive proof of pregnancy.

It will, perhaps, be useful to offer a few remarks on decidua. When a fallopian tube becomes gravid a decidua forms in the uterus, and this curious structure has a diagnostic value. This decidua is rarely retained until the completion of gestation and thrown off during the false labor. Usually it is discharged during the early period of pregnancy in small fragments, without producing pain, or else it is expelled *en masse* with symptoms of miscarriage. When a gravid tube ruptures or aborts, the uterus becomes disturbed and the decidua is expelled. When a decidua is expelled whole it represents a cast of the uterine cavity. It is in shape pyramidal; the base corresponds to the fundus of the uterus, and at each angle there is an orifice corresponding to the uterine opening of each fallopian tube. The apex of the pyramid is occupied by a circular hole, corresponding with the dilated internal orifice of the cervical canal. This is smooth and rounded, whilst the smaller orifices corresponding to the uterine ends of the tubes are ragged. The exterior of the decidua is shaggy, the interior smooth and dotted with many minute puncta, representing the orifices of the uterine glands.

There is little doubt that the majority of cases formerly classed as pelvic hæmatoceles are in reality the result of rupture or abortion of gravid tubes. The cases in which doubts arise are those in which women are seized with symptoms indicating internal hæmorrhage. On opening

the abdomen free blood is found, often in abundance. The tube is widely dilated, perhaps ruptured, and clots of blood hang about the fringes, yet no embryo is detected. In some of these cases a decidua is discharged from the uterus. These doubtful cases will become fewer as operators become familiar with the tubal mole. The mole is so different from ordinary clot that there should be little difficulty in distinguishing it, except in cases in which it is very small.

The following is a summary of the views contained in this paper: (1) The transformation of a tubal ovum into a mole or apoplectic ovum is beyond doubt; (2) the majority of specimens described as examples of hæmato-salpinx are gravid tubes; (3) rupture of a gravid tube and tubal abortion are the common causes of pelvic hæmatocele; (4) mesometric rupture of a gravid tube is a common cause of pelvic hæmatoma; (5) to affirm that bands of fibrin resemble chorionic villi indicates great want of histological knowledge; (6) every clot of blood found in a fallopian tube is not a tubal mole.

Since the discovery of the tubal mole, specimens of non-gravid fallopian tubes are found to be so infrequent that in the last report of the museum of the Royal College of Surgeons I notice an account of "an unequivocal example of hæmato-salpinx." This is a fair indication of the revolution which has taken place in our knowledge of the early stages of tubal pregnancy.

TREATMENT OF ANEURISM AND OF HÆMORRHOIDS, BY HYPODERMIC INJECTIONS OF BLOOD CLOT.

Dr. G. K. Turner, in a paper read before the East Tennessee Medical Society, thinks that this method gives promise of great usefulness.

"As there is no possible method for treating aneurisms that does not involve either clotting of the blood in the aneurism sac or obliteration of the artery, there can be no valid objection *to clotting blood outside of the artery and then introducing it*, where required, by hypodermic syringe."

His plan is, after thorough asepsis, to draw blood from patient's arm, or from the arm of a friend, and clot this blood, or allow it to do so spontaneously. Then strain off the serum and inject at the distal side of the aneurism, first deadening the skin with a four per cent. solution of cocaine. He recommends that the current of blood in the artery be checked by tourniquet or manual pressure beforehand, and the aneurism filled at one injection.

He also proposes the same clot injection for hæmorrhoids in place of using astringents or carbolic acid, which do no more than produce a clot. "Why not use a clot at first hand."

A CASE OF GOITRE CURED BY GALVANISM AND SYRUP OF HYDRIODIC ACID.

Dr. W. C. Wile reports in Nov. No. of the *New England Medical Monthly* a case of goitre which recovered in eight months, under treatment.

The patient, a lady; æt. thirty-seven, mother of four children, had a severe attack of LaGrippe followed by pneumonia. Convalescence was long and tedious. She then noticed palpitation of heart, indigestion, insomnia and extreme nervousness. A careful examination revealed no organic heart disease, but it was found that all of her symptoms were due to a commencing Graves' disease.

She had the enlargement of the thyroid gland, exophthalmia, and all of the nervous phenomena.

The bowels were regulated, and patient given a plain nourishing diet, including sherry wine, sulphonal was given for insomnia.

From eight to ten cells of the galvanic current were administered, placing the positive pole inside the left ear, and the negative over the seventh cervical vertebra applying the current for twenty minutes, each day. Internally, she was given syrup of hydriodic acid, in teaspoonful doses, t. i. d., which was gradually increased, until two tablespoonfuls were taken at one time, t. i. d. Then the dose was reduced, to the original teaspoonful, which she continued taking for seven months.

Improvement was immediate and rapid. The galvanism was stopped at the end of the month, while the syrup of hydriodic acid was continued.

She was discharged perfectly cured.

Selected Formulæ.

TREATMENT OF CARDIAC ASTHMA.

Dr. Ferrand (*Le Bulletin mèdical,*) recommends the following treatment:

General treatment:

1. Each morning two soup-spoonfuls of:

℞ Iodide of sodium..... 25 grams. (ʒ vj).
Infusion of elder flowers..... 300 grams. (fl. ʒx).

2. Every evening, before eating, two soup-spoonfuls of:

℞ Bromide of sodium..... 25 grams. (ʒvj).
Syrup of aconite..... 50 grams. (fl. ʒjss).
Infusion of hops..... 250 grams. (fl. ʒviij).

Treatment of the crisis:

1. Place the hands in a dish of hot water.
2. Give inhalations of ammonia.
3. Give every five or ten minutes five drops of:

℞ Laudanum..... 4 grams. (fl. ʒj).
Cherry laurel water..... 6 grams. (fl. ʒjss).

4. Inject subcutaneously the following:

℞ Atropine sulphate..... cgms. 1 (gr. 1-6th).
Morphine sulphate..... cgms. 2 (gr. ⅓).
Cherry laurel water..... cgms. 10 (fl. ʒijss).

During the intervals one may employ the following means:

Administer each day before the two principal meals a spoonful of:

℞ Iodide of potash..... 20 grams. (ʒv).
Syrup of capillaire..... 125 grams. (fl. ʒiv).

Morning and evening take one of the following pills:

℞ Ext. of stramonium, } aa cgms. 1
Valerianate of zinc, } (gr. 1-5).
Sufficient for one pill.

Every two days take:

℞ Syrup of buckthorn..... 30 grams. (fl. ʒj).

—*Lan. Clin.*

FOR PRURITUS ANI.

An ointment containing:

℞ Creasote or carbolic acid..... 1 dram.
Lard..... 2 ounces.
Camphor..... 1 dram.

Applied topically, is a safe and often effectual remedy for the relief of pruritus ani.—*News.*

ACUTE CORYZA.

Dr. Capitan recommends the following snuff to be used every hour for the relief of acute nasal catarrh:

℞ Salol..... ʒ ss.
Salicylic acid..... vj. grains.
Tannin..... iij. grains.
Boric acid..... ʒ ij

The use of this powder should not be continued for more than a few hours, as it is apt to excite a slight eczematous eruption along the edges of the nostrils. The following is another formula, less active, yet said to have given good results:

℞ Powdered talc..... ʒ j.
Antipyrin..... xv. grains.
Boric acid..... ʒ ss.
Salicylate acid..... iv. grains.

This may be snuffed freely, as it causes no irritation of the alæ nasi as does the preceding.—*Jour. de Mèd. et Chir. Prat.*

TREATMENT OF ACUTE BRONCHITIS.

Simple cases usually recover (Dr. Canfield, *Therap. Gazette*) under the use of a good expectorant mixture, such as:

℞ Ammon. muriat..... ʒss
Mist. glycyrrhiz, co..... ʒiv. M.
Sig.—Dessertspoonful every three or four hours.

When the secretions are abundant, and not easily coughed up, a turpentine emulsion is excellent. For instance:

℞ Ol. terebinth..... ʒij to ʒiij.
Muc. acaciæ..... q. s.
Aq. cinnamon..... ʒi.
Aquæ, q. s. ad..... ʒvj. M.
Sig.—Tablespoonful in water every four hours.

Sometimes the cough is of such an irritating character that expectorant measures avail little. Some narcotic must then be used. Codeine has not the disadvantages of morphine, and is efficient. A good combination is:

℞ Codeine sulphat..... gr. viij.
Syr. prun. virgin..... ʒviij. M.
Sig.—Tablespoonful in water three or four times per day, and at bed-time if necessary.

TREATMENT OF BALDNESS.

One of the best combinations in the treatment of baldness consists of:

℞ Pilocarpinæ hydrochloratis..... gr. v.
Otto de rosæ..... m viij.
Olei rosmarini..... f ʒ iv.
Linimenti cantharidis..... f ʒ iv.
Glycerini puri..... f ʒ j.
Olei amygdalæ dulcis..... f ʒ ij.
Spiritus camphoræ..... f ʒ iij.
M. S.: To be rubbed well into the scalp, night and morning.

—Whitla, *Ther. Rev.*

Book Reviews.

Die Mikroorganismen der Mundhohle. Die ortlichen und allegemeinen Erkrankungen, welche durch dieselben hervargerufen werden. By W. D. Miller. Geo. Thieme, Leipzig, 1892. Second Edition, 440 pages, 134 figures and 18 photograms. 12 marks ($3.00).

The fact that this work ran through its first edition in two years time speaks very well both for the book itself and for the author, who is one of the few Americans called to fill professors' chairs in German universities.

The first part of the work contains a general discussion of bacteriology; the nourishment which bacteria find in the mouth; an historical review of bacteriology as applied to dentistry; methods of preparing cultures, etc.; fermentation caused by bacteria found in the mouth; influence of the fermentation upon different parts of the mouth; caries of the teeth, including both historical review and original investigations upon the same; and asepsis and antisepsis in dentistry. The second part of the book contains an excellent discussion of the pathogenic bacteria found in the mouth.

The entire work is excellently illustrated and will be of value to the practicing dentist as well as to the bacteriologist. We recommend this work to all our dental friends.

A Public Scandal. Inoculation a Preventative of Swine Plague with the Demonstration that the Administration of the Agricultural Department is a Public Scandal. An Exposure by F. S. Billings.

This pamphlet of over 300 pages consists chiefly of a review of Dr. Billings' charges against Dr. Salmon, Chief of the Bureau of Animal Industry, together with charges of treason against Secretary Rusk of the Department of Agriculture, and a personal estimate of his own (Billings) ability and the value of his scientific investigations.

We do not think Secretary Rusk will be tried for treason on account of the charges made against him by the writer, namely: That he (Secretary Rusk) has continued to doubt the value of Billings' methods and has allowed himself to be duped by Salmon. Nor do we believe that the eminent Chief of the Bureau is going to suffer any from attacks made in such manner and in such language.

Some of the statements made are too good to leave unmentioned.

On page 21, the Nebraska bacteriologist asks, referring to himself, "Is there a better man for this work to be found, not only in this country but in the world to-day? Virchow is my only master."

The chapters in which charges of treason are brought against Uncle Jerry Rusk and which discuss "The causes which have led to the conditions here portrayed in American politics" are amusing and in entire keeping with the rest of the book.

Dr. Billings' imagines that Secretary Rusk has spies placed around the Nebraska Laboratory; that the Department of Agriculture stands in great fear of his exposures and that he himself is a modern martyr. His entire book immediately suggests the idea that the author is in an excited, nervous and unhealthy state of mind.

BOOKS RECEIVED.

[In sending books for notice in the REPORTER, publishers are requested, for the information of the reader, as well as for their own advantage, to give the price. This announcement by title will be followed, in most cases, by a review, which will appear at the earliest opportunity.]

An American Text-Book of Surgery for Practitioners and Students. Edited by W. W. Keen, M. D., LL. D. Philadelphia: W. B. Sanders, 913 Walnut St., and J. W. White, M. D., Ph. D.

International Clinics. A Quarterly of Clinical Lectures on Medicine, Surgery, Gynecology, Pediatrics, Neurology, Dermatology, Laryngology, Ophthalmology, and Otology, by Professors and Lecturers in the Leading Medical Colleges of the United States, Great Britain and Canada. Edited by John M. Keating, M. D., J. P. Crozer Grffith, M. D., J. M. Mitchell Bruce, M. D., F. R. C. P. and David W. Findlay, M. D., F. R. C. P. Vols. III. Oct. '91 and IV. Jan., 1892. 8vo., pp. 372. Philadelphia: J. B. Lippincott Company, 1892.

A Treatise on Diseases of the Rectum, Anus, and Sigmoid Flexure. By Joseph M. Matthews, M. D., Professor of Principles and Practice of Surgery, etc., Kentucky School of Medicine. New York: D. Appleton & Company, 1892.

Mother and Child—Part I. *Mother.* By Edward P. Davis, A. M.. M. D. Part II. *Child.* By John M. Keating, M. D., LL. D. Philadelphia: J. B. Lippincott Co. London: 10 Henrietta Street, Convent Garden, 1893. Price $2.50.

A Manual of the Practice of Medicine, Prepared Especially for Students. By A. A. Stevens, A. M., M. D., Instructor of Physical Diagnosis in the University of Penna., etc. Philadelphia: W. B. Saunders, 913 Walnut Street, 1893. Price $2.50.

THE STUDENTS' QUIZ SERIES. *Diseases of the Eye, Ear, Throat, and Nose.* A Manual for Students and Practitioners, by Frank E. Miller, M. D., James P. McEvoy, M. D., and John E. Weeks, M. D. Series edited by Bern B. Gallaudet, M. D. Philadelphia: Lea Brothers & Co. Price $1.00.

Transactions of the American Otological Society. Twenty-fifth Annual Meeting, Fort Griswold House, New London, Conn., July 19, 1892. Volume V., Part II. Published by the Society, 1892.

Proceedings of the Fourth State Sanitary Convention of Pennsylvania. Held at Norristown, May 9, and 10, 1890. Harrisburg, Pa.: Edwin K. Meyers, State Printer, 1891.

Local Boards of Health in the State of New York. Albany: Weed Parsons & Company, Printers, 1892.

Annual Report Philadelphia Bureau of Health, 1891.

One Thousand Prescriptions or Favorite Formulæ of Various Authors, Teachers and Practicing Physicians. The whole being very carefully indexed and including most of the newer remedies. Price $1.00. Published by the Illustrated Medical Journal Co., Detroit, Mich.

Physician's Pocket Diary. For 1893. Any physician who has not received a copy of the McArthur Diary for 1893, will receive one on application, without expense. McArthur' Hypophosphite Co., Ansonia, Conn.

The Physicians Visiting-List, 1893. Lindsay & Blakiston's. Forty-second year of publication. Philadelphia: P. Blakiston, Son & Co. 1012 Walnut Street. Price $1.00.

NEWS AND MISCELLANY.

NATIONAL ASSOCIATION OF RAILWAY SURGEONS.

SIXTH ANNUAL MEETING.

Preliminary announcement of the special program of the sixth annual meeting of the National Association of Railway Surgeons, embracing the United States of America, the Dominion of Canada and the Republic of Mexico, to be held at Omaha, Neb., the last Wednesday, Thursday and Friday of May, 1893. General subject:—"Injuries of the Cord and its Envelopes Without Fracture of the Spine."

1st. History, by Dr. Geo. Ross, Chief Surgeon Richmond & Danville R. R., Richmond, Va.

2d. Anatomical Landmarks, by Dr. Jabez N. Jackson, Surgeon Wabash R. R., Kansas City, Mo.

3d. Physiology of the Spinal Cord, by Dr. A. P. Grinnell, Chief Surgeon Central Vermont R. R., Burlington, Vt.

4th. Experimental Research, by Dr. B. A. Watson, Surgeon Pennsylvania R. R., Jersey City, N. J.

5th. An Experimental Study of Spinal Myelitis and Menengitis, by Dr. Geo. A. Baxter, Div. Surg. Chattanooga Southern R. R., Chattanooga, Tenn.

6th. The Clinical Aspects of Spinal Localization, by Dr. Nicholas Senn, Surgeon Chicago, St. Paul & Kansas City R. R., Chicago, Ill.

7th. Diagnosis from the standpoint of the Neurologist, by Dr. C. H. Hughes, Consulting Surgeon Missouri Pacific R. R., St. Louis, Mo.

8th. Pathology and Pathological Anatomy, by Dr. Samuel C. Benedict, Surgeon Richmond & Danville R. R., Athens, Ga.

9th. Prognosis, by Dr. Samuel S. Thorn, Chief Surgeon, Toledo, St. Louis & Kansas City, R. R., Toledo, Ohio.

10th. Treatment, by Dr. W. B. Outten, Chief Surgeon Missouri Pacific R. R., St. Louis, Mo.

11th. Medico-Legal Aspects, by Judge J. H. Collins, Chief Counsel Balto. & Ohio R. R., West of the Ohio river, Columbus, Ohio.

12th. Statistics of the Amount of Money paid by the Railroads of the United States, During the last Ten Years, for Alleged Injuries of the Spine, by Dr. F. K. Ainsworth, Surgeon Southern Pacific R. R., Los Angeles, California.

13th. Clinical Report—1st, From a Medical Aspect—(a) Permanent Injuries—(b) Alleged Injuries. 2d, From a Legal Aspect—(a) Settled with Suit—(b) Settled Without Suit—(c) Miscellaneous, by Dr. Geo. Chaffee, Surgeon Long Island R. R., Brooklyn, N. Y.

C. W. P. Brock, M. D. Pres't.
Richmond, Va.

E. R. Lewis, M. D., Sec'y.
Kansas City, Mo.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY FROM DECEMBER 4, 1892, TO DECEMBER 10, 1892.

War Department, Washington City, December 5th, 1892. By direction of the President the retirement from active service on Dec. 4th, 1892, by operation of law, of Colonel Anthony Heger, assistant surgeon, under the provisions of the act of Congress approved June 30th, 1892, is announced, and he will proceed to his home.

By par. 6. S. O. 286, A. G. O. the leave of absence on surgeon's certificate of disability granted Mayor J. C. G. Happersett, surgeon, in S. O. 178, Nov. 18th, 1892, Dept. Dak., is extended three months on surgeon's certificate of disability.

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THE
MEDICAL AND SURGICAL REPORTER.

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Original Articles.

THE TREATMENT OF SELF-LIMITED DISEASE.

By CARL E. BLACK, M. D.
JACKSONVILLE, ILLINOIS.

In calling attention to the subject of the treatment of self-limited diseases it is not intended to advance any new theories of treatment, advocate the use of particular drugs or methods, or to make any extended report of cases. The object is rather to present in a questioning way, some of the problems which perplex young men in medicine, some of the questions which are constantly presenting themselves to young men for solution. It is hoped that by suggesting some of these problems, satisfactory and complete explanations will be given by those who are full of wisdom, and rich in the experience of many years. Young men feel privileged to ask questions, and to expect those older in experience to answer them.

There are many things which are calculated to bewilder the student of medicine, but they are multiplied ten-fold after he has been in practice a few years, and has become acquainted to some extent with the habits of treatment pursued by the practitioners with whom he comes in contact. And his bewilderment is in no wise diminished by consulting authorities, for these he finds contain equally conflicting views and dogmatical statements. The young man soon discovers that he can find authority, more or less good, for almost anything.

The special object of this paper is to call your attention to a brief consideration of some points in the treatment of acute self-limited diseases. That is those diseases which run a more or less definite course, and tend to recovery. Please bear in mind especially the last statement, "tend to recovery." Take as examples typhoid fever and pneumonia. These are as different as possible in the onset and in the course they pursue, and yet both have a more or less definite course, and both tend to recovery. A large number of such diseases could be mentioned, but those two will serve the purpose of illustration.

In every case of acute febrile disorder of a definite character we have general symptoms which are brought about by a systemic poison. The poison is generated in some seat of local inflammation, which is properly the seat of the disease. There is a sore with all the characteristics of an external local inflammation. In fact, in some diseases under this head, the seat of inflammation is external, or partially external, as in erysipelas, scarlet fever, etc.

The severity of each case depends on the extent of the inflammatory lesion, the amount of poison generated and absorbed into the system, and on the resisting powers of the individual.

The relative proportion of these three elements is infinitely varied in different cases. The systemic disturbance may be great from an apparently small lesion, or *vice versa*, the lesion may seem large and yet give rise to little systemic disturbance. The peculiarities of the individual and his surroundings have much to do with the severity of an attack of any acute disease.

It is a general proposition beyond dispute, that, by the time we are able to positively diagnosticate an acute disease of this class, it is too late to use any means to check it. To say that we have aborted a case of typhoid fever or pneumonia simply means that we have failed to make a diagnosis, and it would be far better to be honest enough to acknowledge that the typhoid fever or the pneumonia had not existed at all, and that we had simply been mistaken, instead of trying to hum-

bug the patient and his friends into believing that we had accomplished a great and wonderful thing.

When typhoid fever exists,—that is when the inflammatory process is begun in the intestinal glands and sufficient general symptoms have been produced to enable the physician to make a diagnosis,—the disease is there, and will run its course in a fairly definite way in spite of all abortive measures ever tried. When the lung is attacked with pneumonic process, and we have the signs and symptoms on which to base a diagnosis, the pneumonia is there to stay, and to run its course, and no amount of drugging will avoid it. It is absurd to say that a patient would have had pneumonia if certain large doses of quinine has not been administered promptly. How can pneumonia or typhoid fever be predicted before it has arrived? It is difficult to imagine that when typhoid fever or pneumonia is sufficiently fixed in the human economy to enable the physician to make a diagnosis that it can be shaken out by a few doses of quinine or other medicament.

Even before the question of diagnosis is settled there comes an important consideration. That is, not to mask the diagnosis by instituting vigorous treatment too soon. It is not probable that vigorous measures of treatment will be demanded before the diagnosis is fully settled. Frequently cases are treated for malarial fever with large doses of quinine until, much to his embarrassment, the physician is forced to change his diagnosis to typhoid fever just in time to have the certificate of death properly filled out. Added to the probability that if the administration of the quinine had been postponed a little the diagnosis would have been made early, is an equally strong probability that if the quinine had not been given at all the patient's chances for life would have been materially improved. If the teaching of works on Therapeutics are worth anything, it certainly gives quinine little more place in the treatment of typhoid fever than morphine would have in the treatment of opium narcosis.

Quinine acts strongly on the nervous system, and by its use all the nervous symptoms are intensified. When we hear a doctor say that he has made a diagnosis of typhoid fever by "carefully elimating the malarial element by the use of quinine," we can predict with reasonable certainty that his typhoid case will be one with intensified nervous symptoms. A very common error in diagnosis is to fail to differentiate malaria from typhoid fever. It should be rare that a case of typhoid fever is diagnosticated as malarial fever. Malaria should not be used as the shield for our mistakes. The risk to our patients is too great. It is far better to say the disease is not sufficiently developed to make a diagnosis. Above all do not try to force a diagnosis by the use of quinine, for we will certainly do harm if the case proves to be one of typhoid fever.

Let us look for a moment at the general characteristics of acute self-limited diseases. In the first place, we have a person previously healthy, stricken down by an acute onset of disease, having been preceeded by premonitory symptoms more or less pronounced. Then follow all the symptoms of an inflammation. These diseases are variously named according to the seat of inflammation. There is fever as a constant factor in all. The tendency of all is to run a definite course and to end in recovery. There is an inflammatory lesion of which the producing cause is the same in every case of the same disease. Modern researches would lead us to believe that every disease of this class has a specific organic cause, and further, this causative agent is *similar* in all these diseases.

We should always bear in mind that a fatal result follows in only a small per cent. of cases, and always from one of two causes—either there is some complicating element in the case, or there is such an intensity of the poison from the first that a fatal result is almost inevitable. The toxic principle is forced into the system in such quantities that all the vital functions are overwhelmed and overcome in spite of all efforts to assist in eliminating the poison and to sustain the patient. This is peculiarly true of pneumonia. Frequently cases are seen in which the lungs fill up so rapidly, and the general disturbance is so great, that the patient is carried away by the intensity of the disease process.

The fatal cases of typhoid fever are more frequently the complicated ones; but still all have seen cases, which, from the beginning, seemed almost certain to terminate fatally on account of the intensity of the process.

In considering the treatment of these cases the first thing which engages our attention is the question of specifics. Do we possess any specifics for any or all of these diseases? Almost every drug in the pharmacopœia has been accredited with some specific action in one or more acute diseases. But still we will be tolerably safe in saying there are no specifics for these diseases, and in the very nature of things it seems almost impossible that there should be. The proof that several of these conditions are of germ origin, and the inference that all the others have similar causative agents, has given a clue to the group of remedies among which to search for specifics.

After the germs of typhoid fever have been implanted in a patient and have developed sufficient activity to enable us to make a diagnosis, it is probably too late to apply specifics. The use of salicylic acid in rheumatism and mercury in syphilis probably approach more nearly specific remedies than any we know, and yet there is much doubt whether they really cut short an acute attack of rheumatic fever or syphilis when these are once well established. Still the acute symptoms of rheumatism often seem markedly modified by the salicylic treatment. Of course, the specific action of quinine in malaria is beyond dispute.

Thus it seem tolerably well settled that, with very few exceptions, it is beyond the power of the physician's art to cure diseases. The doctors of past generations cured diseases. To-day it is a question whether it is within the reach of the healing art to *cure*, except in comparatively few instances. Even in so simple a thing as opening an abscess we only do that which nature was trying to accomplish, and thus, by assisting the natural process, hasten the reparative process. The broadest usefulness of the physician is found in watching closely the efforts of nature, studying the methods by which she is trying to effect a cure, and rendering such assistance as will be useful. Above all, we should be absolutely sure that we do not *interfere* with nature's plan and retard it, thus doing harm.

It would seem that the general and promiscuous use of antipyretics and remedies which have marked depressant effect on the circulation must be harmful, and retard and endanger the final favorable conclusion of acute disorders. The general use of veratrum, aconite, and the coal-tar derivatives in pneumonia illustrates this thought. The thing most to be feared in this affection is a sudden failure of the heart's action. The best authorities agree that veratrum acts by its power to paralyze the heart muscle and the vaso-motor system of nerves—that it is a cardiac poison and also a respiratory poison. The use of veratrum in pneumonia would not seem desirable as a routine practice, however valuable it may be in the onset of certain selected cases.

That there is a very large amount of useless medication in vogue in the treatment of these diseases, seems evident; and that some plans of treatment are actually harmful is more than a possibility. Of course experimentation in the effects of therapeutic agents is necessary to the advancement of medical science, but such experimentation should be coupled with accurate observation. Empiricism should not be confused with experiment. Our first consideration should be for the welfare of the individual patient. Since, when our case is once established, we cannot abort it and have no specific agents with which to combat it, our first object should be to look well to all the general conditions of the patient and his surroundings. Such considerations as the bath, spongings, diet, hygienic measures, climatic influences and the like should be thought of first. Put the patient in the most favorable condition to resist the disease. The public must be educated to expect more wholesome advice and less useless drugging. Let us remember that much of the medication in vogue is a matter of fashion, and changes almost as rapidly as the seasons. The truly scientific advances in medicine never change, because they are founded on truth and not on theory.

Where is the dreaded plague which once devastated vast populations? Science has stamped it out with its agent—hygiene. How is it that cholera and yellow fever do not spread like the prairie fire and destroy thousands of our inhabitants as they used to do? Science has fenced them in with its agency—quarantine. How is it that cases of small-pox appear but do not spread their contagion to our communities? Science has placed its shield, vaccination, about us. What has become of puerperal fever, with all its dangers to life and home and happiness? Science has sent its agent, asepsis, to prevent it, but if it

should appear, has given us the agent, antisepsis, with which to control it and stamp it out.

These are a few of the posts which stand out prominently to mark the real progress of the last few years in the management of disease. These advances have nothing to do with the giving of drugs, but are infinitely more important. Not that we think for a moment of abandoning the use of drugs, but they should not be considered *all-important*. Do not despise such advice as fresh air, good light, clean linen, the bath, quiet rest in bed, comfortable, quiet surroundings, nutritious but appropriate diet, and attention to the excretions and secretions. It will be the exceptional case of an acute, self-limited disease which will really demand the administration of drugs when all the general conditions are fully attended to. We know that when the disease is established there is little in our art that will affect it directly, except as we observe what nature is trying to accomplish, and render assistance or remove obstacles which lie directly in the line of her efforts. Certain symptoms may be modified and the strength of the patient conserved by well-chosen measures which will assist nature in her efforts.

The largest field of usefulness in the future is to be found in warding off disease by sanitary protective measures and by securing individual immunity. It is hoped that the discussion of this subject will bring out more in detail the usefulness and uselessness of the measures and agents in popular use in this class of disease.

We have few remedies which are definitely shown to be useful in acute self-limited disorders, and there is little general agreement among authorities as to what measures will be found beneficial. One author recommends an agent, another author of equal standing condemns it. Much of the present treatment is empirical, and not founded on any reasonable physiological or even experimental basis. While we are trying to find remedies which will do good, we must remember to be sure and do our patient no harm. Recognize the power of nature and assist her, for, if her efforts are seconded judiciously, she will allow few to die.

The following quotation from a well known authority (Herrmann Nothnagel, of Vienna, *Popular Science Monthly*, May, 1892,) is full of meaning:

"Although the expectation and the possibility of controlling the fundamentals of pathological processes are so limited, the healing art is nevertheless not doomed to vain contemplation and inactive dallying. While art cannot master nature, it can follow it with diligent observations. The truth of this remark covers a genuine progress and furnishes the key of the success of really great physicians. To investigate the exact origin of pathological changes; to ascertain by what method and under what conditions disturbances of the organism are most easily overcome and counterbalanced; deliberately to support and imitate these methods if possible; and, before all. do no harm, is the way by which the healing art can accomplish something important and good. History proves incontestably that practical efficiency at the sick bed goes in an exactly parallel line with the cultivation of scientific methods. Medicine to-day, without yet being able directly to cure the pathological condition, reaches, simply by following the principles here laid down, incomparably more favorable results than formerly. It has learned, first of all, not to interfere so as to destroy the course of natural compensations, but seeks by dietetical, hygienic and climatic influences here, by the removal of excitants there, by methodical stimulations of the matter-changes of the nervous system, to put the organism into a condition to overcome the pathological disturbances. To use such measures, carefully adapted on principles of scientific observation and enlarged knowledge of the course of disease to the most diverse conditions, continually to furnish a closer support to the natural compensations and adaptations, that is one of the ways in which the healing art must turn in order to enlarge its scope."

MODERN TREATMENT OF EMPYEMA.

By D. A. K. STEELE, M. D.,
CHICAGO, ILLINOIS.

PROFESSOR OF PRINCIPLES AND PRACTICE OF SURGERY AND CLINICAL SURGERY IN THE COLLEGE OF PHYSICIANS AND SURGEONS, CHICAGO.

The great increase in the number of cases of empyema during the past year or two, is a sufficient reason for considering the best methods of dealing with this surgical affection.

The greater frequency of pleural abscesses is probably due to the saturation of the blood with bacterial germs of recurring epidemics of influenza.

By empyema we mean a collection of pus in the pleural cavity; bounded on one side by the soft, receding, compressible lung, and on the other by the firm, unyielding, bony chest-wall.

In the consideration of its surgical treatment we follow the lines laid down by Immerman, of Basle:

First, to evacuate the pus.

Second, to prevent the formation of more purulent matter.

Third, to restore the respiratory apparatus to its normal condition.

To accomplish these three objects a great variety of surgical procedures have been devised. In a paper presented to the surgical section of the thirty-ninth annual meeting of the American Medical Association, held in Cincinnati, May 10, 1888, I classified the choice of operations as follows:

First, aspiration.

Second, aspiration and washing out of the cavity with an antiseptic solution.

Third, thoracentesis with trocar and canula.

Fourth, thoracentesis with subsequent drainage.

Fifth, simple incision.

Sixth, simple incision and drainage.

Seventh, simple incision, with through and through drainage, with or without antiseptic precautions.

Eighth, subperiosteal resections of rib and drainage.

Ninth, thoracoplasty—Eslander's operation.

Tenth, perflation.

Greater experience with these different methods enables me to say that aspiration for diagnostic purposes and to afford temporary relief to the patient, followed by simple incision and drainage with antiseptic irrigation and the application of an antiseptic dressing, constitutes the modern method of treatment of empyema. In some cases where the ribs are too close together to afford room for the drainage tube, or where its presence produces neuralgia from pressure upon the intercostal nerves, the subperiosteal resection of a rib must be resorted to, although it is seldom that I have found this procedure necessary.

In regard to the technique of the operation I would say, that the simplest, speediest and safest plan of operation is the best. The one that subjects the patient to the least additional risk of shock, pain, or time of operation should be selected.

Time of operation.—The operation should be done at the earliest possible moment after a diagnosis of a collection of pus in the pleura has been made; nothing is gained by delay and much valuable time is lost. The strength and vitality of the patient are jeopardized.

Anæsthetic.—Local anæsthesia by hypodermic injection of a five or ten per cent. solution of muriate of cocaine, or by freezing the site of operation with an ether spray, is greatly preferable to the use of a general anæsthetic, especially where there is a large collection of pus, or where the heart has been displaced.

Site of Incision.—The incision should be made in a location that will most perfectly drain the pleural cavity, whether the patient is lying or sitting.

These requirements are best met by an opening in the vertical line below the posterior fold of the axilla, between the sixth and seventh ribs on the right side, and between the seventh and eighth ribs on the left side. Of course, various modifications of the site of the incision are required for special cases.

Two plans of making the incision are open to us: either to pinch up a fold of the skin with thumb and finger at the point indicated and transfix it with a sharp-pointed bistoury, thus leaving an incision of two inches in length down upon the intercostal muscles, which are quickly separated by dissecting forceps and the bulging pleura punctured with sharp-pointed scissors or director, along which the drainage tube, grasped by a pair of forceps, is pushed into the abscess cavity; or you may push the index finger of the left hand down between the ribs at the point selected, and alongside of it introduce a grooved exploring needle, and along the groove of the exploring needle push a narrow, blunt-pointed bistoury and make a two-inch incision midway between the ribs through the entire thickness of the chest-wall, and introduce your drainage tube. I prefer the first method, although both are done very quickly and safely.

A double tube should always be introduced, so that you can throw a stream in one tube and have the return current flow out of the other. The tube should not exceed one-third or one-half inch in diameter, and only the return tube should have lateral perforations. There should be a free opening at the inner extremity of the tube. This is easily obtained by bending the tube upon itself and cutting off half the thickness of one side of the bent fube. An ordinary safety-pin holds them well in position.

Andrew's tube is too large for the majority of cases. Hancock has recently fused two tubes together and fitted over them a rubber plate or collar which is a decided advantage.

After thorough irrigation with a warm antiseptic solution until the water returns clear, the wound around tubes is covered with iodoform gauze and a moist dressing of bichloride gauze ten or twelve thicknesses surrounded with salicylated cotton, is applied and kept in place with a flannel roller. The dressings should be changed and the cavity irrigated daily for the first week, and thence every other day.

The strength of the solution may be bichloride of mercury 1 to 8,000 or carbolic acid one per cent., or Labarraque's solution, one to twenty, which latter is the safest.

The temperature of the water should be 100° to 105° and the quantity for each irrigation should be at least two gallons.

The time of treatment required under this plan is from two to six weeks.

It is not necessary to wait until the cavity is completely obliterated before the tube can be removed, but when for several days there has been an absence of pus, and the discharge consists of a small quantity of colorless, odorless serum, the tube may be removed after a thorough irrigation, and the cavity sealed up. It is possible to disinfect and sterilize an old septic cavity where old adhesions prevent its obliteration by approximation of the lung and chest-wall, and then seal up a clean cavity of large size and have no further trouble from it.

I believe in the majority of cases tubes are left in too long and irrigation continued too persistently, and that it is possible for us to materially shorten the duration of treatment of empyema cases.

SOME SUGGESTIONS ON INGUINAL HERNIA.

By W. M. HARSHA, M. D.,
Chicago.

Considering the prevalence of inguinal hernia, the frequnecy with which strangulation occurs and the dangers that attend it, we may well be surprised at the want of interest manifested by the profession generally in its prevention and treatment.

Among the most potent predisposing causes are hereditary muscular defects and lengthened mesentery. With these, little can be done in the way of prophylaxis.

Among the most frequent exciting causes, especially in the young, where most cases occur, are constipation and phimosis. These are conditions that may be remedied. Strict instructions to nurses in regard to the management of infants may prevent many cases of hernia. The practice of giving soothing syrup or other opiates often induces a constipation that may cause a hernia. The use of castor oil may be followed by a secondary constipation. A small enema is often all that is needed to move the bowels, and the mildest means which will suffice are to be urged, especially in families predisposed to rupture. The neglect of a phimosis has been a frequent cause of hernia, as is well known. The treatment of the phimosis is demanded from other considerations as well. The longer the conscientious physician practices his profession the more he feels the responsibility of his position; and the neglect of anything that may cause a hernia may prove a disagreeable memory to the physician as well as a source of mortification and danger to the patient.

After the hernia has occurred we have a foe worthy of our steel and we should not send the case to a truss-man at random. There are conscientious and skillful instrument-makers who try in a rational and intelligent manner to treat each case on its merits, but the majority of these men have a favorite truss or appliance, as they may be pleased to term it, with which they profess to treat all cases successfully.

Directions given in text-books are often vague and leave much to the judgment of the surgeon. In congenital cases not

infrequently the management of an undescended testicle is involved in the treatment, where a nice adjustment of a small pad may be a necessity. Again, we may have a case of long standing where the rings are approximated and present the appearance of an opening straight into the abdomen directly above the pubic bone. In such cases a hard pad with the pressure in the right place will injure the cord, while over the usual site of the internal ring it is wide of the mark. Such a case I have found best-managed by means of a soft rubber pad filled with water, which may press close to the pubic bone, retaining the hernia, but sparing the cord. It is my belief that a majority of cases in children may be cured in a reasonable time by properly selected and adjusted trusses, if the same care and attention be given to them that other surgical cases no more important command. Our duty is not done when a truss is adjusted. We should keep the case under observation and note the progress, or lack of it the same, as we would in a case of spondylitis.

Operations of a radical character are not often to be recommended in the young except when strangulation occurs. The different character of the sac in many cases of congenital hernia and the lack of intelligent co-operation on the part of the patients contra-indicate operation as a rule. However, where the rupture is not retained by a truss and where conditions tend to grow worse, I think it our duty to treat them by operation.

My experience with the injection method in children does not encourage me in its use. In some cases, both of children and adults, I have used it successfully, especially where the opening has been small, the hernia reducible and the canal not obliterated by long distension. I have used the injection as recommended by Warren, of Boston, the fluid composed mainly of a concentrated fluid extract of white oak-bark. The injection method has, however, been well characterized as blind surgery, and can be recommended in but a limited number of cases.

Since aseptic surgery has come to us, open operations are comparatively safe when done in the absence of strangulation, and we believe will become more frequent in both children and adults. Considering the very high death rate from strangulations and operation for relief, it seems strange that operations should be so rare in the absence of strangulation, or so late when it is present.

There are many cases of hernia, that are not well retained by trusses, that are painful and constitute a constant source of danger, in which operation should be advised.

In the conduct of the operation the first requirement is absolute asepsis so far as that is possible.

If there has been much distension of the skin and subcutaneous fascia, enough of the redundancy should be removed to secure a smooth and somewhat tense covering. The incision recommended by Dallas, of New York, commends itself to me. It is begun above the pubic bone and carried straight outward beyond the canal, then straight upward. The triangular flap is then dissected up and reflected, exposing the field of operation. Incision is now made along the direction of the canal through the deeper structures down to the sac in the usual manner.

The sac is next treated according to the individual preference of the surgeon, but should be cut off close up to the internal ring, or treated in such a manner as to prevent any protrusion or pouching.

Buried animal sutures should be used as recommended by Marcy, of Boston, throughout the extent of the wound along the canal, in order to get the most firm union. The flap of skin and fascia may now be stitched in place, preferably, I think, by silkworn gut, tied as advised by Treves, i. e., using only the first part of the ordinary surgeon's knot and left lying flat on the surface. If much tissue has been resected a tension suture may be used.

The edges being easily approximated, may be painted over with flexible collodion, saturated with iodoform, and an antiseptic dressing placed over the whole. Union by first intention, may be expected throughout, and if it is thought best to wear a truss afterward, it can be adjusted so as not to be directly over the cicatrix as in the ordinary operation. In a majority of cases I believe a truss, with only moderate pressure, should be worn for a time, as I think the danger of pressure atrophy very slight. The frequency of ventral herniæ after laparotomies shows the necessity for precaution in any operation involving the abdominal wall.

In calling attention to this subject I wish to emphasize the following points:

1. That hernia in children may frequently be prevented by strict instructions to the nurse, or by operating to cure a phimosis.

2. That hernia having occurred, a persistent effort should be made to effect a cure by means of suitably adjusted trusses while the child is in the growing stage.

3. That failing to effect a cure in that way in due time, and especially failing to retain the hernia, an operation should be advised—usually the open method.

4. That in adults where retention is difficult and uncertain, and the patient made uncomfortable or disabled, an operation should be advised in the absence of strangulation, and an early operation in case of strangulation.

5. That after operations it is better to wear a truss or some sort of support until adhesions are firm.

THE TREATMENT OF TUBERCULAR PERITONITIS.*

By WILLIAM H. MYERS, M. D.,
FORT WAYNE, IND.

"My Uncle Toby" considered that the secret of human happiness lay in the possession of a soul-satisfying hobby. If his idea was correct, then it has been our good fortune to be happy since 1821, at which period Drs. Graves and Stokes, of Dublin, first directed attention to the use of opium in the treatment of peritonitis. Afterwards under the teachings of Dr. Clark it assumed considerable permanence and predominated over all other treatment and was regarded as curative. This period constituted the opium habit of the profession. At present we have a progressive invasion by the surgeon of this once purely medical region. Inertia in the profession is passing away. Professors and authors are no longer followed by us, with a punctuality equaled only by the old order of monks, about penance and absolution. We are just now emerging from the doctrines of the living ancients, that opium, alcohol and liquid diet is the treatment for peritonitis, whatever its cause, and whether it be general, circumscribed, diffused, septicæmic or tubercular. If there be those present who endorse this treatment under all conditions then I can only say, "God hath not justly dealt by them," for a correct diagonsis with a correct apprehension of the etiology of each case must suggest a different line of treatment from that mentioned. We assert that it is only through a perfect diagnosis that we can see when and how therapeutical or surgical measures must be attempted. Upon this all correct treatment must depend. It is also of primary importance that the etiology be definitely settled at the earliest moment. "We must learn the beginnings of disease" as remarked by Sir Wm. Gull: "Often when the gathered clouds of the final storm have filled the atmosphere, it is in vain that we look around to see from what part of the heavens it began." When we have arrived at the conclusion that peritonitis is present, and have discovered the cause, the blow must be struck simultaneously with the onset. No delay can safely be tolerated, the only hope of rescue being the sudden arrest of the disease, for in the language of Hutchinson, "it is almost impossible to exaggerate our conception of wild-fire rapidity with which inflammaion of the serous membranes may extend when once an adequate cause has been supplied. By the time that the normal outlines of the abdomen are obscured by tympanitic distension, respiration quickened and shallow, the pulse rapid and wiry, the supreme moment for precise diagnosis is passed"

I need hardly remind you that the greatest advancement made in the surgical treatment of disease, was the result of investigation by abdominal surgeons into the tolerance of the peritoneum; this led to new lines of research and from them have resulted a complete revolution in peritoneal surgery. They soon discovered that idiopathic peritonitis was only found in the text-books and not in the abdomen. Passing from this to the subject of our paper, we may quote the language of Dr. Osler, that "abdominal section for tubercular peritonitis is the most recent triumph of surgery." At the last meeting of the American Obstetricians and Gynecologists, I reported two cases of tubercular peritonitis treated by abdominal section, washing out the abdominal cavity and drainage,

*Read before the Southern Surgical and Gynecological Association, Nov. 15–17, 1892.

with complete recovery. Since then I have operated upon another case, apparently with a like result. All these cases were males, with ages ranging from twelve to twenty years. In the last case adhesions were extensive, between the bowels, accompanied by tubercular deposits, and a strong band of lymph thrown across the colon in the right iliac fossa, causing obstruction and was believed to be a case of typhlitis. The diagnosis was only made clear by the laparotomy; there was present only a moderate amount of fluid. The enlargement of the abdomen was due to numerous deposits in the mesentery. The body was emaciated. This case evidently belonged to the adhesive form of the disease, and this accounts for the irregular and impeded peristalsis or intermittent obstruction of the bowels, it being the most prominent symptom.

The chief interest in these three cases is the bearing they have upon the treatment of chronic tubercular peritonitis. Let us contrast the result of surgical treatment with medical treatment. Under the latter the prognosis had been so grave as to preclude the possibility of holding out to the patient the least hope of recovery. Loomis, one of Clark's disciples, says: "The treatment of tubercular peritonitis demands small doses of opium, warm anodyne applications, tonics and cod-liver oil." His prognosis he states as follows: "Tubercular peritonitis after weeks and months of anæmia and exhaustion, terminates in death." Davis under the subject chronic peritonitis, says that "all cases arising from tuberculosis are incurable, temporary relief may be obtained by removal of the accumulated fluid by aspiration or tapping, but the diseases which have given rise to the peritoneal trouble being themselves incurable, there is an inevitable tendency to a fatal termination." Bauer, in Ziemssen's Cyclopedia, regards the prognosis as absolutely fatal; the same opinion is expressed in Pepper's System of Medicine, and Fagg speaks gloomily of the issue. So if we trust medical writings on the subject, recovery from this disease must be considered rare and exceptional.

Curability by Operative Treatment — Kœnig, of Göttingen, gives an opinion founded on 131 cases, that by laparotomy 95 per cent. are much benefited and 25 per cent. completely cured. Manoange supplies us with 68 cases, of whom 13 died soon after operation, 15 disappeared, 14 remained alive at the end of six months and 26 at the end of twelve months. Homans records two cases with recovery. Goodell has operated on four cases; three recovered and one died in six months after the operation. Mundé has operated in three cases with one death and two recoveries. Kelly gives four cases and four recoveries. Imbach mentions five cases on which he had operated, with four recoveries. Grieg Smith has operated on two cases with one death. Pitts has operated on three cases and all made good recoveries. In a report of 112 cases the results may be stated as follows: One was unrelieved, 26 apparently recovered; 28 died soon after the operation, 57 made a more or less complete recovery—nearly 50 per cent.

In support of this new departure, I present the following quotation from a recent author: "Though it seems that the surgical claims are extravagant, I nevertheless, believe that in the routine treatment of tubercular peritonitis, recourse should be had to surgical means, both more frequently and at an earlier period than is commonly the case." Hare, in his recent work, speaking of two opposing factions in the profession, the one addicted to salines and the other to opium, claims the first-class dogmatically assert that the physician should turn over every case of peritonitis to the surgeon, to be opened, searched and purged, and he further asserts that too many cases of peritonitis are to-day walking examples of the value of the use of opium to permit anyone to assert that this treatment is useless.

In reply to this argument, I need only say that "walking examples" are referred to every day to attract the credulous, to crowd the consulting rooms of charlatans, who trade upon the discoveries of science to palm off their monumental proofs of success.

Diagnosis.—Called to a case, upon what symptoms, objective or subjective, can we rely as authorizing an abdominal section? The presence of tubercular peritonitis may be inferred if pain in the abdomen resembling colic and tenderness often recur with diarrhœa and febrile excitement present only temporarily; subsidence of these symptoms and the patient relieved, and in a few days again recurring, possibly in an aggravated form, and accompanied by a

mass detected in the umbilical, hypogastric, or iliac regions; the body wasting at the same time, while the abdomen remains large, often tympanitic, and with less of its suppleness; there may be detected serum or lymph and the difficulty of promoting absorption by the usual remedies, may be considered. In this discussion we have limited tubercular peritonitis to those cases in which the peritoneal affection predominates,—essentially an outbreak of gray miliary tubercles upon the peritoneum, from which inflammation of this membrane ensues. The disease presents itself in one uniform process, but with different stages; the ascitic, the suppurative and the adhesive. The first is the earliest stage; its product is serum. In the second stage we have pus, the product of the inflammatory action. In the third, adhesions due to the presence of lymph thrown out, the bowels agglutinated thereby and obstruction resulting therefrom. Now, gentlemen, the treatment must suggest itself to you. In the ascitic form to remove the fluid; this is essential to recovery; here the trocar and aspirator as curative procedures are abandoned and relegated. I would strongly impress upon you the free use of the knife. This has happily been substituted with the highly satisfactory results already referred to. In the second variety—suppurative—we know of no reason why the same general principles of treatment by surgical interference—the early evacuation of pus—should not be carried out. In the adhesive form, as its name implies, adhesions will be found between the intestines and possibly the parietal peritoneum; here obstruction of the bowels, often incomplete, accompanied by distension is often present. These cases are often latent and the pathological lesion is only revealed by an operation. The operation needs no especial description, only the suggestion of extreme caution, to open the abdomen freely, and to remove fluid lymph and caseous material as completely as possible, and not to depend merely upon the withdrawal of the fluid, the ancient method which is here considered "more honored in the breach than in the observance thereof." I would further advise the avoidance of germicidal solutions, to use hot water instead, to use drainage, and that the after dressing and after treatment be managed in the usual manner.

Communications.

RUPTURE OF THE STOMACH.*

By JOHN W. GROFF, M. D.,
HARLEYSVILLE, PA.

Traumatic rupture of the stomach without injury of adjacent organs is, I presume, a rare occurrence. Such a lesion, verified post-mortem, leads me to present the following case to this society.

A farmer, F. B., Aet. 50; a German, residing in this country but a few years; married; above the average in height; of strong muscular development; temperate, industrious and exceedingly frugal in his habits. On the day of the accident, immediately after breakfast and while gearing his horse, he was kicked by the animal, receiving the full force of the blow directly over the region of the stomach. He was able to reach the house, a distance of perhaps 150 yards, where I saw him an hour and a-half after the accident. I found him in bed, lying upon his right side with his extremities drawn up, and in the utmost agony. Occasionally he would vomit but the material was ejected without any force. There was no external evidence of injury visible save a few drops of blood in the umbilical fossa.

Shock was profound, and the pulse at the wrist was barely perceptible. Upon making a hasty examination I concluded he was mortally injured, and beyond the reach of human endeavor. Hence, the only object to be aimed at was the production of euthanasia. A prognosis was given accordingly and our efforts directed to making him as comfortable as possible. I gave him at once a hypodermatic injection of morphia $\frac{1}{2}$ gr., atropia $\frac{1}{100}$ gr. In half an-hour gave a second injection of $\frac{1}{4}$ gr. of morphia, followed in thirty minutes by a third injection of $\frac{1}{4}$ gr. of morphia. These were followed by a fourth injection at the end of another half-hour, when he became comparatively quiet and the vomiting ceased. The pain was not completely relieved at any time.

Dry heat was applied to the extremities and I left him to return in about five hours. During this interval reaction had occurred and the mortal nature of the injury was still more evident. He lin-

*Read before Montgomery County Medical Society, November 2, 1892.

gered, however, and died sixteen hours after receiving the injury.

Autopsy by Dr. H. F. Slifer sixteen hours after death. Upon opening the abdomen the contents of the stomach were found free in the cavity. Careful examination of the whole length of the intestine showed no injury whatever. He found in the stomach a large irregular opening, about two inches in length, transverse to the lesser curvature, more on the anterior surface and nearer to the pylorus. All the coats of the stomach were divided completely excepting a few thin meshes of the serous coat still remaining over the wound. The omentum was deeply congested, as were the neighboring parts. There was considerable serous effusion in the abdominal cavity, also an increased amount of fluid in the pleural sac and in the pericardium. No free arterial blood had been noticed in the vomited matters. There were evidences of old pleurisy, but no other organs showed noticeable evidence of pathological change.

[This report, necessarily condensed, is of interest on account of the character of the injury and the method of treatment pursued. Possibly a different result would have followed more active measures.

The condition of the patient—shock, pain, *forceless* vomiting, history of the accident, etc., seems to point definitely to the location of the injury and to suggest, at least, one of the organs involved. *Ante-mortem* section of the abdomen would have confirmed the diagnosis and perhaps, avoided this performance *post-mortem*. It certainly would not have hastened it. Repair of the opening, in the stomach, flushing the abdominal cavity with hot water and closure of the abdominal incision, with provisions for drainage, if they did not prevent the final result would have been more productive of *euthanasia*. The probability of a satisfactory outcome is indicated by the fact that, in spite of the injury and the treatment, the patient lingered sixteen hours. —Ed.]

FOR COLDS IN THE HEAD.

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Hydrochlorate of cocaine	2 grains.
Menthol	4 "
Boric acid	30 "
Finley powdered coffee	8. "

M. Sig.: Take in pinches five or six times a day.

—*Chem. and Drug.*

Society Reports.

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting of November 4, 1892.

The President, Dr. F. C. Simpson, in the chair.

OBSTRUCTION NEAR INNOMINATE VEIN.

Dr. C. W. Kelly: Doubtless many of you have seen this patient, Thomas Welsh. He has been in the City Hospital during the past year. He was first in the Surgical Ward under the care of Drs. Yandell and Rodman. After examination he was sent to the Medical Ward and came under my care. I examined him and found obstruction to the flow of blood through the superior vena cava, the obstruction being located near the vena innominata, the heart being free from disease; the veins in the neck, face and arms were much distended and on the least exertion the face and arms would turn purplish black. I lost sight of this man three months ago, at which time, upon making an examination, I found the veins on the side of the trunk very large, the long thoracic and deep epigastric veins being fully the size of the index finger, the right being larger than the left. It was found that the current of blood was flowing from the head, neck, arms and trunk through these channels down to the inferior vena cava by the iliac veins; this could be very easily proven. A case like this I have never seen before. This man received an injury about a year ago, caused by the fall of a telegraph pole upon his head. However, I see no connection between the injury and his present trouble. He has suffered from an attack of pleurisy, affecting the left side. I suspect the obstruction has resulted from an inflammation, either of pleura or of tissues near the superior vena cava.

DISCUSSION.

Dr. W. L. Rodman: I would say that when this man came to the Hospital, a year ago last September, he was sent into the Surgical Ward. I was visiting surgeon at the time. After making a very careful examination, and from the history of the case I reached the conclusion that the blow on the head could not have had anything to do with the trouble, and referred him to the Medical Ward.

Dr. F. C. Wilson: The practical question is, what can be done, or whether anything can be done for him. The case seems to be progressing; I recollect seeing the patient over a year ago, and there has been considerable increase in the distressing symptoms since that time. The trouble seems to be gradually increasing, and I would like to inquire what has been done, and what the prospect is for doing anything for him. If the trouble is due to some inflammatory deposit an effort should be made to absorb this. Possibly iodide of potassium or bichloride of mercury would be of benefit, as these agents are known to produce good effects upon inflammatory exudates. I do not know whether any methods of this kind have been tried or not.

Dr. C. W. Kelly: Concerning the suggestion made by Dr. Wilson: This man was given iodide of potassium and the mercurial agents in large doses continued for six months, without any apparent benefit. I think nature is doing more for him than anything else could possibly do. His only hope of long life evidently is through the enlargement of these channels that are being opened up.

STRICTURE OF ŒSOPHAGUS—PATHOLOGICAL SPECIMENS.

Dr. W. L. Rodman: This specimen is the stomach and œsophagus removed from a man at the post-mortem examination. The history of the case is about as follows: German, forty-seven years of age; I found him in the Surgical Ward at the City Hospital when I went on duty about two months ago. He gave an uncertain history of syphilis to some of the physicians, but from what he told me I think he had an attack of gonorrhœa; he said he had a discharge from the urethra some ten or fifteen years ago. For eight months prior to the time I saw him, he had marked symptoms of stricture of the œsophagus. His œsophagus was carefully examined and the stricture located just below the thyroid cartilage. At the time I saw him he was unable to swallow even a drop of water; he had taken no food for two or three weeks; he was suffering the pangs of hunger; was going down hill all the time, and we commenced giving him enemata of milk and brandy. He improved very much for two or three weeks, really gaining a little flesh, and said that the enemata we gave him daily relieved his hunger and he was made far more comfortable by them. As he was doing so well, we thought we would hold him until we moved into the new Hospital. Then we intended to do a gastrostomy. As I said he was improving on the rectal feeding, and for two or three weeks gained flesh, he was able to be out of bed and worked around the Hospital. I was very much surprised to find, on going to the Hospital one Monday morning, that the man was dead. I was told by the *interne* that the patient had developed diarrhœa on Saturday, the bowel refusing to retain the enemata any longer, and died on Monday morning before my visit.

This is a very interesting case: The stricture is so complete that you cannot get anything through it at all. I saw the man make four or five attempts to swallow some water, not a drop of which passed the stricture, judging from the amount that returned. The stricture is just about where I thought it was, a couple of inches below the thyroid cartilage. When I saw him he said the first symptom he had of stricture was eight months previous to that time; now the stricture was complete. The man had taken large doses of mercury and iodide of potassium which did no good.

I suppose it must be stricture as a result of traumatism. I do not think it was the result of a neoplasm, although this was my opinion at the time. It does not look like an epithelioma; there is no apparent history of traumatism; no history of his having swallowed caustic of any kind. I believe now that it resulted from simple ulceration, the result of trauma.

DISCUSSION.

Dr. A. M. Cartledge: It strikes me as being a remarkable stricture of the œsophagus; it does not present the appearance of a malignant or syphilitic stricture which we usually find; I say this from the simple appearance, although the stricture is a very severe one and is probably due to trauma originally; due to something he swallowed, causing ulceration and a resulting cicatrix.

Dr. Wm. Cheatham: I saw this patient during my term of service at the hospital, and never saw a man improve so

much under rectal feeding. I tried both the bougie and œsophagoscope and each marked different depths of the stricture. I have used the œsophagoscope on several cases of stricture very successfully. I had a case a few days ago complaining of stricture three or four inches down, which the œsophagoscope showed to be spasmodic in character. This instrument can also be used to good advantage on growths in the œsophagus. The only objectionable feature is that the patient has to be cholo-formed and put in an exaggerated tracheotomy position, the head at almost right angles with the spinal column, to introduce the instrument. I tried it on an old man, and found it could not be used, because his neck was to stiff.

Dr. W. O. Roberts: I agree with what Dr. Cartledge has said; it looks very much like a case of stricture, the result of trauma. I have just been to see a young lady who was brought here two weeks ago from a distance. While at a party she said she swallowed a bone, and it lodged in her throat. This was on Saturday, two weeks ago. I saw her on the following Monday with the family physician and another gentleman who pays particular attention to throat surgery, and made a careful examination, but could find no bone in the œsophagus. The following Monday she suffered more and her suffering continued to increase, her throat began to swell on the outside, and last Monday she had great difficulty in swallowing liquids, (from last Monday week until last Monday), then ceased to be able to swallow at all. I examined her this evening, found her temperature 101½° F. She has not taken anything into her stomach since last Monday; both sides of her neck badly swollen, extending nearly up to the angle of the jaw, and on the inside I detected a post-pharangeal abscess, a little to the left of the center, in which is undoubtedly fluctuation.

Dr. C. Skinner: I will report a case in the same line, showing how a man was relieved. About four weeks ago a man came to me from Pineville, having been unable to swallow even water for about forty hours. I tried different sized tubes and could get nothing to pass, and sent him over to the Infirmary with the expectation of going back later in the afternoon and trying it again. Just before my time to go, his brother came over and said he had been able to swallow some water. He accomplished this by filling his mouth full of water and then forcing it down. I gave him some milk which was swallowed in the same way. I then passed a tube about the size of your finger, and it marked two distinct strictures,—one about one and one-half inches below the other. The tube was grasped very firmly at these points. He went home without any further trouble.

Dr. E. R. Palmer: It is very questionable in my mind whether the trouble in Dr. Rodman's case could have been due to syphilis: First, because of the great rapidity of its development, and second, because it should have been followed by very decided amelioration under specific treatment if it were a tertiary lesion. With the uncertain history and the absolute failure of specific agents to have any effect whatever, I should be inclined to attribute the trouble to trauma.

Dr. W. L. Rodman: I accept the theory of trauma. When I made the statement that there was no apparent history of trauma, I meant that he had never swallowed any sulphuric acid, lye or anything of that kind. If there was any traumatism, the patient did not remember it. I think in swallowing some bone it probably lodged for a time, causing simple ulceration, which resulted in stricture.

I am satisfied in my own mind that it is not a syphilitic stricture. In the first place syphilitic strictures of the œsophagus are not so common as some think they are. Then, as Dr. Palmer says, it would not have veloped so rapidly if it had been the result of a syphilitic attack ten or fifteen years ago. I questioned the man very carefully when he was brought into the ward, and am satisfied, from the information he gave me, that he had never had syphilis, but it was simply gonorrhœa. He never had any eruption; never had throat trouble; never had enlarged glands; never lost any hair, and I have no reason to suspect that he had an attack of syphilis.

Dr. D. T. Smith: It seems to me in this case, if there had been trauma sufficient to result in a stricture of this extent, the man certainly would have remembered it.

PLASTIC EFFUSION INTO THE PERICARDIUM.

Dr. C. W. Kelly: Instead of reading a paper this evening, I will report a case

or two which have come under my observation within the past five or six days.

A week ago last Thursday I was called to see a young man, a medical student, suffering with pain over his heart. When I went into the room, I found him very much excited; his pulse was irregular, and on change of position would increase in radidity. It was found, on examination, that there was a plastic effusion in the pericardium, and its movement to and fro with the heart-sounds could be very easily made out. There was nothing peculiar in this case, no accumulation of fluid in the pericardial sac, and nothing except this plastic effusion.

No. 2: The second day after that, one of Dr. Marvin's patients sent for me in a hurry, the message being that a gentleman was very ill. I called at the house and found another medical student who was suffering from a similar trouble, although it differed in some respects. As soon as I went into the room I heard a peculiar noise. I asked the young man who was in attendance what it was, and he said he did not know, but every four or five minutes we would hear that peculiar sound. I can compare it to nothing but the pulling of wet leather from a smooth stone, a sticky,sucking sound. I was very much interested in this peculiarity and the patient was very anxious. The young man said that Sunday night he went to church and while there had a severe pain, beginning at the scapula and terminating in the lower part of the sternum. The pain was so severe that he became anxious and went home. After reaching home he went to bed, lying upon his back, and found that he could not turn over; the pain continued and a physician sent for. This is about the history of the case.

I asked the patient if he had ever had an attack of rheumatism, and he said that he never had rheumatism or a pain of any kind before. Upon examination I found that there was pericardial plastic trouble, and very strange to say, the heart seemed to have become attached to this body of lymph, that I suppose was poured out into the pericardial sac. The pulse was very irregular,—there would be several beats, then an interval, the heart seeming to stick to the lymph. It ranged from forty to seventy-five beats per minute, and I was very much afraid the man was going to die. He was very much excited. I found the to and fro friction rale which had been masked by the first or second sound of the heart. I suspected first that it was pleuritic trouble, the heart rubbing against an inflamed pleura; when I asked the patient to stoop forward, I found that the same peculiar sound continued, and I keep him in the recumbent position, perfectly flat. Yesterday the sound was disappearing; no longer that peculiar action of the heart; pulse had become regular; pain decreasing and altogether the gentleman seems to have convalesced. The other case reported is also in the same condition, convalescence seems to have been established in both cases. I have kept these patients perfectly quiet, would not allow them to get up fearing effusion, although to all appearances they seem well enough to sit up. I have never seen a case before where simple effusion caused such interference with the heart's action, and have been unable to determine the cause in either case reported. As I stated there is no history of rheumatism in either case, and both patients have heretofore enjoyed good health.

DISCUSSION.

Dr. J. B. Marvin: I have seen more cases of pericarditis in dead halls than I have recognized during life. I have one or two very pretty specimens of this plastic effusion. I had a very interesting case of this kind, at the city hospital, in a negro boy where there were the ordinary physical signs of pericarditis and an area of increased dullness; from the appearance I thought of course it was effusion, and inserted my hypodermic needle but could get nothing out by it. I repeated this various times and although I had demonstrated effusion, I could not get it out. Undoubtedly the lymph was so thick that it could not flow.

I was interested in one point made by Dr. Kelley, and it is one that I have been investigating carefully for the last few years, namely the relation between endo- or peri-carditis and rheumatism. I have certainly seen cases where I could not trace any history of rheumatism. In cases where there is no subsequent joint lesion, it seems to me rather doing violence to the true etiology to claim that they are rheumatic in origin, and I am satisfied we have been led astray by the older authorities.

Dr. Wm. Bailey: From the statements made by Dr. Kelly I understand that these murmurs, so-called, were not synchronous with the heart's action. I would like to know if the Doctor counted the repetition of these for a minute so as to get at what was produced. A fluctuation murmur, pericardial, ought to correspond with the heart-beats, just as an endocardial murmur does, or as the fluctuation sounds of pleurisy correspond with the number of respirations per minute. But it is practically competent, I think, for an inflammation to be in one membrane and one of the other membranes produce a frictional sound. It seems to me the fact that fluctuation did not disappear when respiration was stopped, indicates pericarditis. Pericardial murmurs are, as a rule, communicated to the pericardial space; not transmitted, as endocardial murmurs, outside of that space.

As to the question of rheumatism: I think it is safe to say that the majority of these affections, either endo- or peri-cardial, are due to rheumatic causes, whether there are any other manifestations or not. Simply to have no joint complication is not proof that it was not rheumatism.

The interesting point in the case reported by Dr. Kelly would seem to me to be to determine whether it was pericarditis or whether it was inflammation of the pleura so closely situated to it, so nearly related to it, that the motion of the heart might cause fluctuation of the pleura; the quick convalescence and the apparent short course of the case, too, might have some bearing upon the location or character of the disease.

Dr. Wm. Cheatham: I would say in regard to the rheumatic element in these cases, we see a great deal of it in inflammation of the eye. Take, for instance, episcleritis and inflammations of other parts of the eye, without any other manifestations of rheumatism at the time, and many will afterward develop joint complications confirming the diagnosis.

Dr. J. B. Marvin: How do you account for endocarditis following pneumonia? How do you explain cases of ulcerative endocarditis? How do you explain cases of endocarditis following measels and scarlet fever? I think Thomas or Wunderlich puts measels next to rheumatism in frequency as the cause of endocardial inflammation. Certainly the tendency among German authors is to ascribe endocarditis more frequently to bacterial infection than rheumatic influences.

Dr. C. W. Kelly: In reporting the cases in question I did not take into consideration the cause. I am satisfied from observation that both endo- and peri-cardial troubles are often met with aside from rheumatic diathesis. For instance, in Bright's disease you often meet with pericardial trouble which is frequently the cause of death. You frequently meet with pericardial trouble in the course of typhoid fever, and in these cases it is usually fatal. An especially interesting feature in the cases referred to is that this effusion or lymph within the pericardium seemed to control the heart's action, or to change its rhythm. It was to call attention to this fact that I reported the cases.

Dr. Wm. Bailey: It seems to me that a pulse of forty to seventy per minute is a very unusual thing in pericarditis.

Dr. C. W. Kelly: It depends altogether upon the patient. If the patient is kept quiet the pulse will be slow, but if allowed to worry or change position the pulse becomes very rapid.

LEFT LARYNGEAL PARALYSIS.

Dr. J. M. Ray: This specimen was removed, post-mortem, from a negro aged forty-eight years. I saw him first in March; he came to my office suffering from partial loss of voice. Upon examination of his throat at that time, I found a left laryngeal paralysis, his vocal cord being in what we call the cadaveric position,—half way between abduction and adduction. I saw him once or twice and then he passed from under my observation until about the first of October, when he came to me one morning suffering very much from dyspnœa. I sent him to the city hospital and asked Dr. Rodman to take charge of him. Afterward he was presented to the class by Dr. Yandell. On examination of the throat at that time it was found that the left laryngeal paralysis was complete, and the right vocal cord seemed partially paralyzed. We kept him quiet in the city hospital for a few days with instructions that he be carefully watched whenever he had one of the spasms of dyspnœa. He grew better

of this dyspnœa. Dr. Rodman examined him physically and made diagnosis of aneurism of the arch of the aorta although the symptoms were not very decided. In a day or two he was taken with a violent attack of dyspnœa and died. By post-mortem examination we found a large aneurism of the arch of the aorta. Shortly before the patient died the *interne* performed a laryngotomy but it afforded no relief. I assume that the dyspnœa must have been due to the aneurism pressing upon the pneumogastric nerve on that side. How to account for the inability to abduct the cord on the opposite side, I cannot tell.

This case is particularly interesting to me as I have a similar case under treatment now; a man thirty-nine years of age consulted me in April last, and on examination of his throat I found slight interference with the motion of his left vocal cord; he was very hoarse and had acute local symptoms, œdema, etc. Under local applications they all disappeared, and after thoroughly examining him I made up my mind that he had left vocal cord paralysis. I treated him for a while with little or on improvement in the symptoms. Then he went to New York and consulted several specialists there who told him he had paralysis of the left vocal cord, due to aneurism of the arch of the aorta. Then he came back and under large doses of iodide of potassium his voice has improved, but the left vocal cord is still paralyzed. The right cord has taken on the duty of the disabled cord and now he is able to talk in an ordinary tone without any trouble at all. The man has gained in flesh, is perfectly hale and hearty and attends to his business as wholesale buyer for a large drygoods house. To all appearances he is in perfect health.

DISCUSSION.

Dr. Wm. Cheatham: Dr. Ray's case is certainly a very interesting one. By recent investigations of the recurrent laryngeal nerve, all the symptoms can be easily explained. I have just had a similar case in the person of a white man aged about sixty. He died of rupture of the aneurism. This case has a specific history. A post-mortem was held, but the specimen was lost.

Dr. W. L. Rodman: There is very little to add to what Dr. Ray has said. The man was referred to the Surgical Ward and after a very careful examination, I thought I detected an aneurism of the arch of the aorta, and the autopsy has proven that my diagnosis was correct.

Dr. J. M. Ray: I have seen four cases of laryngeal paralysis since the first of January—in addition to the two here reported, I have seen two others. One is a man seventy-six years of age, who has complete left laryngeal paralysis; another a young lady who has complete paralysis of the left vocal cord. No evidence of aneurism can be found in either of these two cases. I notice that Bosworth reports having seen only fifteen cases of unilateral paralysis. Out of the fifteen cases the trouble was on the left side in eleven and on the right in four. Of the eleven on the left side, only four were due to aneurism and he makes the statement that aneurism is not as often the cause of recurrent paralysis as we might at first be led to believe.

GUNSHOT WOUND NEAR BLADDER.

Dr. A. M. Cartledge; I would like to ask Dr. Vance to give us a short resume of a case he reported to this society seven years ago, then I will make a continued report of it. I refer to the boy who was shot in the region of the bladder.

Dr. A. M. Vance: Seven or eight years ago I was called, in an emergency, by Dr. Hays to see a patient who had been shot in the belly. I found a boy about nine years of age, in shock, and with about this history; he had a toy pistol and had bought some Flobert cartridges without balls in them; in endeavoring to load this pistol the bullet that he had put in first would not allow the cartridge to go in, therefore he took a railroad spike to hammer it in; the cartridge was exploded the ball entering his abdomen about two and one-half inches below the navel. Dr. Hays, who was the family physician, was called about half an hour after the accident. The boy was treated for shock, the only symptom or evidence of his having been shot was hæmorrhage from the urethra, which was not very excessive. I saw him again in the afternoon. He had reacted fairly well and recovered without any further manifestations. I told the family at that time that I thought the bullet had entered the bladder and believed, in years to come, an opera-

tion would have to be performed for its removal, as a stone would probably form around it.

Dr. A. M. Cartledge: Some two months ago I saw this patient with a physician of this city, and substantially the same history was given me as detailed by Dr. Vance. From the subsequent history we all believed that it was a case of bullet wound of the abdominal cavity that had gotten well without a laparotomy. The question was discussed for a long time as to the propriety of doing a laparotomy without any symptoms of a general character indicating the operation. When I saw the patient he was suffering from an abscess (which had been opened by his physician) two inches below the umbilicus and a little to the left of the median line. The abscess opened was still discharging. On account of some trouble in his family the operation was postponed, and the sinus closed and they thought he was about well. Two weeks ago the abscess again refilled in the same region and his physician again opened it a few days ago. I then told them to send him to the infimary and I would see if we could follow up the original sinus and locate and remove the offending body. We introduced a probe which could be pushed backward at least five inches, I am quite sure it went behind the pubic bone to the left side of the bladder. Then I determinedto follow it up in this direction; it was dilated apparently to the bottom, but I could not feel any foreign body with the dilator. I then introduced a soft catheter with a curette, probably about six inches in this direction, but it being of soft material could not detect any foreign body. I again introduced the dilator following up the old sinus and finally detected the bullet, but the question was how to remove it, through the very small sinus. After some little difficulty this small bullet was removed from the left side of the bladder-neck. The sinus was packed from the bottom with gauze. I think the bullet could probably have been removed from an incision through the perineum, if it could have been located. He has made an uninterrupted recovery.

DISCUSSION.

Dr. W. O. Roberts: Was the hæmorrhage from the bladder during micturition?

Dr. A. M. Vance: Yes. There was only one hæmorrhage and that was during micturition. The boy was relieved of all his symptoms very quickly; was kept in bed for about ten days. I saw him three times only. He was then about nine years of age.

CASES OF SYPHILIS.

Dr. E. R. Palmer: I have recently seen two cases of chancre in the female, on the right labium minus, occurring as the initial lesion. I suspected syphilis in both cases, but discovered it by being led through other reasons to make an examination. In one case the chancre has been followed by secondary eruption, which is now fading; the other is in bed to-night with syphilitic fever.

Another case is a man who developed chancre eight weeks after copulation. This is the second case which has come under my observation where infection has come from the same female, the patients each supposing they had contracted gonorrhœa.

The fourth case came to my office four days ago with a small but plainly defined chancre to the left of the frænum. The second or third visit he made he called my attention to a fever blister (as he called it) upon his lip, which I found upon examination to be an immense chancre. It was a case of double infection at two distinct points, contracted from the same female and at the same time; infecting his lip from kissing and the penis from coitus.

STUDY AND PRACTICE.

While common sense is an absolute necessity for any profession or vocation, I know of no one where it is more necessary or important than in the study and practice of medicine. If I were asked to define the term common sense, it might be difficult; but it will be sufficient for our purpose, at this time, to say it consists in applying rational, simple rules of construction to the various theories of medical science, adopting and practicing what can be measured by such rules, and rejecting those that are at plain variance and antagonism with them.—*Ex.*

Correspondence.

"THE CONSERVATIVE."

Editor of MEDICAL AND SURGICAL REPORTER: — "Conservative," according to Webster, is, "one who, or that which, preserves from ruin, injury, innovation or radical changes; a preserver, a conserver." "The Conservative," medically speaking, according to a goodly number of writers in these days of "brilliant" exploits, is a back number, a "chump," a doctor or professor whose platitudes are "fatigueing in the extreme."

If there is one quality more desirable than another, in the profession, it is honesty. Honesty of opinion, honesty in criticism, honesty in treatment, medical or surgical. In this light let us look at the "Conservative." He is not necessarily either a fool, or an old fogy; it does not follow that he takes no journals, nor visits clinics, or "Polyclinics." He is just as likely to possess a Sims or a Goodell, as a Ferguson speculum—and more so. You generally find him as the man who has read both sides of the question. He it is, who, when visiting a clinic, takes it all in and thinks, while the other fellow is blowing about the new operation, and getting only a superficial view of the case. "The Conservative," is the man who has not only seen many old theories die out, old treatments set aside; but new theories wither; new treatment fizzle and new instruments condemned that were ushered into the medical world, in a blaze of light and glory. "The Conservative" is the fellow who wants to know before he acts; who thinks before he speaks. He it is, who has learned how much there is yet to learn, and how deceptive are flashes on the horizon. He it is who wants to know if it is the headlight of a locomotive or the moon that is looming up ahead; a sun or a dog sun that is claiming attraction as a new light. It is not the "Conservative" who never makes a "safe hit." He strikes when he gets ready and is sure to make "first base;" he watches for the safe time to make each succeeding base. He may keep back the impatient fellow "at the bat," but it won't hurt the batter to have time to think a little. It is your "Radical" that generally gets "out on first," seldom reaches "second," and rarely, if ever, "third." Once in a while a fellow who has looked over the whole field and studied the situation, knows his time has come, strikes and makes a "home run;" but he is one of the very few, and his success was due to "Conservative" thinking, not to "Radical" rush. It is not your "Conservative" who writes:—

SOONERVILLE, April 1st, 1892.

MESSRS SMITH & DUBS.

Gentlemen: It is most gratifying to be able to report that since I added your "Smith's silent perambulating pills" to my armamentarium, I have had three cases of Leucæmia in which they were exhibited. Recovery was rapid in cases one and two. But in case three, owing most probably to inefficient and partly ineffectual absorbtion, resolution was prolonged about ten days. A difference of 50 per cent. compared with cases one and two. The profession owe you a deep debt of gratitude. I shall continue to use your S. S. P. P's in all cases. Please send me another dollar's worth.

Very fraternally yours,

JOB LOTS, M. D.,

Gilhooly Col., '89.

It is the "Conservative" however who, after reading similar certificates, piously exclaims, "The good Lord help that fellow's patients, when they do get sick!" It is the "Conservative," who knows that patient has a liver, spleen, kidneys, stomach, *and* "other things," and finds out "how they are," and "how they have been." It is your Radical, who says, "Let me see your tongue, please. Ah! I thought so, I will have to make a vaginal examination."

Your conservative physician says, "we will try injections." It is the radical who exclaims, "give him mercury, it will go through him, or bust a gut." It is your conservative surgeon who say, "I can save that leg." It is the radical that utters, "whack it off, I'll do a semi-circular with a triangle trim, flaps too ancient." It is your conservative gynecologist who says, "this patient is a woman, I will try and keep her a woman, with all her womanly functions intact." It is your radical who says "I'll extirpate these ovaries, and shorten that round ligament. She will never be a mother, and that probably suits her, and positively suits me, for here is, name, fame, and three hundred dollars."

"He pleasantly smiles when the deed, it is done,
Saying, 'Pinko Chanky, isn't it fun.'"
(*Apologies to the author of "Witilsee Whanko whoo."*

It is the conservative gynecologist who knows, that it was the mental effect of an operation for a supposed ovarian disease that cured, at least for a time, the real neurosis. It is your conservative, who knows, that healthy ovaries, have been removed to cover up faulty diagnosis; and who realizes, that, if what is now said about the necessity or advisability of abdominal surgery were all true, a large per cent. of his female patients would have joined the great majority long ago. The conservative knows a good thing when he sees it, or it comes to him mentally. He knows a "craze," and has it sized up while the radical is trumpeting his short lived triumph. He it is, who thinks of the awful *unwritten* history; while he is ready to sanction, or to operate to the extent of his ability, when operation is justifiable. It is he, who knows that not even a respectable minority of practitioners have it in them to be experts in gynecology, or special surgery. It is all very well to poke fun at the poor tyro with his "Ferguson" and his tampon; his sound and his battery; but it is a burning shame on the medical profession to advocate, in the same breath, the ruthless and often unnecessary, destruction of the womanly functions. Dr. G. G. Shoemaker, a Penna. University man, and one of the best fellows, in the world, remarks to me, in this connection, this—"My own opinion is, that in a majority of cases, it is the *other* sex that should be attacked. That this world would be better, and freer from disease, physical and mental, if a little judicious *castration* were performed. This would not interfere with the peeling of bark, drinking whiskey, pumping beer, parting his hair in the middle, or wearing an "oy gloss y' knaw," but it would cut down the production of criminals, imbeciles and lascivious libertines."

That idea is a good one. Now in the not distant future, when the conservative has caught on to the good, and knocked out the bad, in present pelvic surgery, the radical will have to take a new departure.

The doctor's idea, will give him a starting point. Let the radical castrate for a—well, let us say, a gonocaccus; amputate in part or wholly, the penis, for ulcer or stricture; and in the mean time, fire hot shot, into the old bougie, syringe, caustic, mercury and iodides. The more you think of it, the more one sees that this doctor is right. The results normally and physically would outstrip present methods, and this world would be better. But, alas! the male would not put up with it, or *for it*. He prefers, as ever, to let the woman bear the penalty.

However, the doctor's idea is too radical for the purposes of this paper, and we go back to the "Conservative."

I had a patient come to me, whom three experts, (and I say experts as those "away up" in their speciality), had declared, had diseased ovaries, and "they must come out." I did not think so, and after a careful examination wrote the whole history of the case, and symptoms to Prof. Goodell. Result, I was right and experts wrong. Rest, Blaud's pills, corrosive sublimate, and the despised "Smith Hodge" pessary did the work. Another patient, who was certain she had all the ills the female pelvis is heir to; who had been treated again and again, was cured by simply staying in bed. I gave her an essay of Dr. Goodell's to read, which so accurately described her case that its mental effect largely aided the cure. These are only trifles by the wayside, but they are trifles that are repeatedly magnified into conditions for operation.

Your "Conservative" knows that he must be prepared to do a Cæsarean section; but he also knows that if he is going to make a business of abdominal surgery he must have the conditions right. First, right himself; second, surroundings right—patient under constant surveillance by trained nurses, with skilled fingers and perfect cleanliness. If he can't have these, and all these, he won't operate (unless in an emergancy) and he is foolish if he does. Better, far better for him and patient, to let her go where all these things can be had. I almost fancy, I hear some good-natured Radical softly singing at this point:

"Oh! Mother, may I go out to swim?
"Yes! my charming daughter,
"Hang your clothes on a hickory limb,
"But, don't go near the water."

That is all right for him but, here's to the "Conservative" brother—I am not sure I belong to his tribe. I am afraid I am somewhat mixed. But, here's to him! To him, I lift my hat, and I drink his health in spring water. He is a royal good fellow; the great balance wheel that keeps us all in check, and prevents the Radical from annihilating the whole race in order to preserve a specimen.

S. S. Towler, M. D.
Marienville, Pa.

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THE MEDICAL AND SURGICAL REPORTER.

SATURDAY, DECEMBER, 24TH, 1892.

MEDICAL LEGISLATION IN PENNSYLVANIA.

ABSTRACT OF BILL UNANIMOUSLY ADOPTED FOR PRESENTATION TO THE LEGISLATURE BY THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

1. The Board shall consist of nine members, graduates of some legal medical school, "no two of whom shall be residents of the same County, and none of whom shall be a member of the faculty or staff of any medical school or university."

2. The members shall be appointed by the Governor by and with the advice and consent of the Senate.

3. Only physicians commencing practice in Pennsylvania after July 1, 1893 "shall be examined in anatomy, physiology, chemistry, pathology, hygiene, toxicology, differential diagnosis, surgery, and obstetrics; and each applicant, upon receiving from the secretary of the board an order for an examination, shall draw by lot a confidential number, which he or she shall place upon his or her examination paper, so that when said papers are passed upon by the examiners the latter shall not know by what applicant said papers have been prepared, and upon each day of examination all candidates shall be given the same set of questions."

4. The examination papers and marks shall be preserved and shall be open to public inspection in case of dispute. "No one shall be excluded or rejected on account of adherence to any special system or school of practice."

5. "Each applicant who shall have passed a satisfactory examination shall receive from the said board under seal a license to practice medicine and surgery in the Commonwealth of Pennsylvania.

6. "Nothing in this act shall be construed to prohibit service in cases of emergency or the domestic administration of family remedies."

7. The applicant shall pay an examination fee of ten dollars and "in case of failure at any examination shall have the privilege of subsequent examinations without the payment of an additional fee."

The Committee of the State Medical Society has just issued a pamphlet calling the attention of the profession to the necessity of urging the Legislature to pass the bill prepared for the creation of a State Board of Medical Examiners. This pamphlet gives the views of physicians from all parts of the State, and shows that the desire for some legislation to protect the public from ignorant practitioners is a general one. The legality of such legislation is proved by extracts from decisions of the Supreme Courts of the various States and also from the Supreme Court of the United States. A very forcible quotation is given from the decision of Justice Field of the United States Supreme Court. He says:

"No one has a right to practice medicine without having the necessary qualifications of learning and skill; and the statute only requires that whoever assumes, by offering to the community his services as a physician, that he possesses such learning and skill, shall present evidence of it by a certificate or license from a body designated by the State as competent to judge of his qualifications."—(U. S. Supreme Court, 129 U. S. 114).

There are already twenty-four States and Territories which require physicians beginning practice within their limits to exhibit their proficiency and knowledge before medical authority established by State law.

The fact that separation of the licensing power from the teaching power is earn-

estly advocated by President Eliot, of Harvard University, is strongly brought forth. Such an opinion coming from one who is interested in education, and yet not a physician, carries great weight.

The pamphlet gives the Faculty Resolutions of the Jefferson College, the University of Pennsylvania, the Woman's Medical College and the Polyclinic endorsing the bill. This shows that these progressive and broad-minded medical schools are fully aware of the risks of allowing teachers of a faculty to confer licenses to practice.

The members of the State Society must certainly be gratified to see these well-known schools take such high ground in advocating reform which has been so long needed.

Dr. Millard, of Minneapolis, has truly said that the enemies of a State Board of Medical Examiners principally include the representatives of those colleges governed by *commercial* interests, whereas, the friends of medical legislation include the mass of the profession and those who represent the better colleges of the country. The general profession well know that the opposition to the Medical Examiners Bill usually comes from the "two year's" schools and from those who are afraid that their graduates cannot stand a reasonably searching State examination.

Copies of this document can be obtained from the members of the Legislative Committee of the Medical Society of the State of Pennsylvania, the Chairman of which is Dr. H. G. McCormick, of Williamsport.

The REPORTER hopes that every honorable effort will be made to support the bill and to assist in its enactment as a law.

ANÆSTHETIC SALVE FOR HEMORRHOIDS.

The following is given in *Med. Chir. Centralbl.*

℞
Cocaine ..... grs iij.
Morphia ..... grs. ivss,
Atropine sulphate ..... grs. iij.
Tannin ..... grs. iijss.
Vaseline ..... 3v.—M,
Apply after each evacuation of the bowels.

Translations.*

BY MARIE B. WERNER, M. D.

Operative Treatment of Epilepsie, by Dr. H. Kümmel, of Hamburg (*Deutsch Med. Wochen.*, 23, 1892). The author reports seven cases of genuine epilepsy, on whom he attempted various operative procedures.

In the first two patients he followed W. Alexander's method, and ligated the vertebral artery, but neither the unilateral, or later the ligation of the opposite artery, resulted in any but a passing improvement.

Alexander's theory being, that by ligation of the vertebral artery, some of the nerve fibres of the sympathetic passing from the ganglio cervicale superius, are included, which severs their connection with the superficial portions of the brain.

W. Alexander even extirpated the ganglion in question with the hopes of producing a cure. The author also extirpated it in a womon æt, 46, with but transient improvement.

Trephining was practiced by Kümmel in five cases of genuine epilepsy, in which there was no history of trauma, nor was it possible to localize definitely the seat of the motor center affected by the history of the attack, a persistent painful spot, however, always showing itself after the attack; served as a guide to the operator, and the desirable results attained after trephining, served as an encouragement to the author. There were no appreciable anatomical changes found.

The most favorable results however gained, are in those cases of so-called Jacksonian Epilepsy produced by trauma. Kümmel operated in three such cases, excising portions of abnormal dura mater with complete cure in two cases.

The author further reports a case of Iodiocy in a three year old boy who had a deep depression below the lamdoid suture —resection of the depressed portion resulted in recovery and marked mental improvement.

Dr. H. König, of Hermanstadt, (*Münch Med. Woch.*, 1892) presents a very interesting account of the recovery of six corpses which were forcibly thrown out of the Echo-schaft, with large quantities of

* Translated for MEDICAL AND SURGICAL REPORTER.

water, during a severe storm July 3, 1890. They were found floating on the top of the Iod-Soolbad-Salzburg.

Careful examination proved them to have been victims from the battle near Salzburg, February 4, 1849. They were all excessively heavy; the tissues were thoroughly macerated with salt water; quantities of salt crystals were found internally; rigor mortis was present to a slight degree; no decomposition; the odor compared to pickled meat; and they appeared like bodies kept a long time in alcohol.

The skin was ashy gray, hard, smooth and devoid of hair; the mucous membrane pale. The nails were incrustated with a thin, yellowish substance.

The bodies being frozen when thrown down the shaft, presented quite plainly the injuries received, *i. e.*, fracture of the skull, punctured and shot wounds and injuries from blows.

The integument on being cut, looked much like bacon, the internal organs were apparently fresh—for instance, the liver substance on being cut, was dark brown in color, and its structure well preserved. This state of preservation was found in all organs except the brain, which had changed into a reddish-gray fluid.

Kümmel calls attention, 1st. To the wonderful conserving properties of the water in the Echo shaft.

2d. That the fluid entered into the deepest structure, crystals having been found in the spongy portions of the bone.

3d. That the number of years (41) which elapsed since the bodies had been exposed to the action of this fluid, gave ample proof of its penetrating qualities, since crystals were found in organs entirely shut off from direct contact.

For these reasons Kümmel thinks this water can easily take the place of the more expensive alcohol for museum specimens. A chemical analysis has not yet been made.

Buglioni—Fracture of the spinous process of the seventh cervical vertebra—(*Raccoglitore Med., 1892, June 20*). Patient, a boy between fourteen and fifteen years, while playing was thrown face downward, another boy falling upon him, his elbow resting upon his neck; the little patient at once experienced a sharp pain. On being examined a few hours later Buglioni found a complete separation of the spinous process from the seventh cervical vertebra. Absolute rest and proper bandages resulted in complete union in twenty days. An isolated uncomplicated fracture of this kind is certainly of rare occurrance.

Holländer, in his studies on the use of Pental as an anæsthetic, (*Deutsch. Med. Wochen 1892. page, 857*) after having used it for some time, presents the following conclusions: 1. Pental is in all cases an active anæsthetic; it differs in this from Bromide of Ethyl, which has failed in some cases. 2. Anæsthesia sets in more slowly than in Bromide of Ethyl but lasts longer and the patients recover from its influence more slowly.

3. Holländer has never noticed nausea or vomiting follow its use, and but rarely observed any symptoms of excitation.

4. Neither respiration nor the heart is influenced during narcosis—exceptionally there has been a slowing of the pulse in the anæmic or a slight increase in the excitable.

5. For some patients 2-3 c. c. are sufficient to induce narcosis; in all cases as a rule 10 c. c. are sufficient.

6. The excitable or markedly anæmic patients with weak heart's action, or old bronchial catarrh, do not stand Pental well.

7. The Junker apparatus is best adapted for its administration; the fumes are kept from the eyes, a smaller quantity is used, the unpleasant odor is not so easily noticed and the quantity can be regulated.

8. Narcosis is complete in one to three minutes.

Schmidt—Acute primary hæmorrhagic encephalitis (*Duetsch. Med. Woch. 1892*). A girl of nineteen, having enjoyed previous good health, having been subjected to some undue strain, began to suffer from intense general headache and vomiting; this was soon followed by apathy, and short epileptiform attacks, the latter increasing in frequency. There was occasional conjugated deviation of the eyes to the left, slow respiration, coma and death. Section, revealed hemorrhagic encephalitis, red softening of both optic thalamus and corpora striatum, extending farther to the left; blood in both lateral ventricles, most in the left.

Abstracts.

MEDICAL EXAMINING BOARD OF VIRGINIA.

We append a few of the question that were presented to the candidates at the examination held at Alleghany Springs, Sept. 14 and 15, 1892.

As the questions in the different sections were very fair and cover considerable ground, we give a few, for the study of those interested in efforts to advance medical education.

SECTION ON CHEMISTRY.

Q. 4. "What are alkaloids? mention three of the more important, and give the physical and chemical properties of each."

Q. 5. "What are the properties of ozone? In what respects does it differ from oxygen?"

SECTION ON ANATOMY.

Q. 1. "Describe the anterior cerebral fossæ."

Q. 2. "Name and describe the ligaments of the knee-joint."

SECTION ON PHYSIOLOGY.

Q. 1. "Give the physiology of the lymphatic system, so as to include the following items: (a) Anatomical structure and arrangements of lymphatic vessels, from their origin in the tissues, to their place of communication with certain veins. (b) Special office of lymphatic glands."

Q. 6. "What effects follow section of the facial nerve after exit from the stylo-mastoid foramen?"

SECTION ON MATERIA-MEDICA.

Q. 5. "Name the most efficient antispasmodics; Give doses of each."

Q. 6. "What are "excito-motors" and what are depresso-moters? Give examples of each group with doses.

SECTION ON OBSTETRICS.

Q. 1. "To what diseases are pregnant women most liable? Give pathology of each."

Q. 4. "What measures are absolutely necessary to prevent septic infection during the process of parturition?"

Q. 5. "Give diagnosis of pelvic peritonitis, its treatment and possible sequelæ."

SECTION ON PRACTICE OF MEDICINE.

Q. 2. "Give the symptoms and physical signs of aortic insufficiency and diagnose it from mitral obstruction."

Q. 5. "Differentiate broncho-pneumonia from lobar pneumonia."

SECTION ON SURGERY.

Q. 1. "Diagnosis and treatment of penetrating wounds of abdomen, with visceral lesions."

Q. 3. "Differential diagnosis in detail of chancre and chancroid."

Q. 5. "Symptoms of arthritis and synovitis."

Q. 6. "Differential diagnosis of tetanus, hydrophobia, and spinal meningitis."

INTUBATION OF THE LARYNX.

Dr. James B. Ball, of London, gives an interesting report of twenty-two cases of intubation of the larynx in (*The Lancet*, Nov. 26, 1892). Sixteen occurred under the care of some of his collegues at the West London Hospital, the remaining six belonged to his private practice. All were children ranging in age from thirteen months to eight years. Of the twenty-two ten recovered. Intubation was performed in every case for symptoms of acute laryngeal stenosis which threatened the life of the child, and as the alternative of tracheotomy. In two cases the laryngeal trouble arose from traumatic causes,—in one from swallowing very hot tea, in the other from swallowing carbolic acid. The rest were cases of laryngitis, simple or membranous (diphtheritic); it was not always possible to distinguish which.

In five cases the disease was secondary to measles, four of these died. In seven cases tracheotomy was performed after intubation had been tried, principally because the tube seemed to be clogged with membrane or secretions. All of these died.

In the cases which recovered the tube was left in the larynx for periods varying from three to thirteen days, the average period for the ten cases being eight days. The thread was allowed to remain *in situ* in four cases, and in one of these it is noted that the child dragged the tube out by its means. In the rest of these cases the thread was removed immediately after

the introduction of the tube. The author thinks it the best plan to remove the thread at once.

In two cases an ulcer was found *post-mortem* on the anterior wall of the trachea, at a point corresponding to the position of the lower end of the tube. It is only right to mention that the tubes used in these cases were not constructed in accordance with O'Dwyer's later patterns.

The author continues to say: "I have no intention here to make any remarks on the value of intubation or on the relative merits of intubation and tracheotomy.

I will merely say that in two of my own cases both of which recovered, tracheotomy had been previously recommended as the only chance of saving the child's life, and had been declined by the parents owing to the slender hope which was offered even if the operation were performed.

In both these cases they gladly consented to the mild and bloodless operation of intubation, although I only held out an equally slender hope of recovery. In this way I feel sure that some lives may be saved by intubation which would otherwise not be saved, and, moreover, the operation is not so likely to be deferred until the child is *in extremis* as tracheotomy often is."

"INFANTILE RESPIRATORY SPASM."

In a paper recently read before the Edinburgh Medico-Chirurgical Society, Dr. Thompson gave a short account of five cases that had come under his observation in which this curious and interesting condition had existed. It is also known as congenital laryngeal stridor, or infantile laryngeal spasm, and Dr. Gee has described a similar, although somewhat different, condition under the term "respiratory croaking." Of Dr. Thompson's five cases, three were boys and two were girls, whereas in all previously recorded instances where the sex is mentioned it seems to have been confined to girls, and the condition is often said to occur only in female children. As regards family history and general health, there is nothing of very great significance, except that in four of the cases more or less indigestion was present. In none of the patients was rickets apparent when the children were first seen, but it appeared later in those longest observed. There was no sign of congenital syphilis in any of the cases, and intellectual development seemed perfectly good. The onset of the stridor was noticed in three instances immediately after birth, in one infant it was not observed until a week, and in the other a fortnight later. As regards the course of the malady, Dr. Thompson says that in very severe cases the stridor goes on increasing in loudness during the first two or three months and then tends to subside spontaneously, and as improvement goes on the intervals become longer and the sound less loud, that accompanying inspiration, the crowing sound, disappearing first, while the croaking may still be present at times. After the stridor has ceased to be heard under ordinary conditions it may appear if the child is specially excited or angry; when the stridor is present inspiration begins with a croaking noise and ends in a high-pitched crow. When the breathing is quiet the latter does not occur. Expiration is accompanied by a short croak when the stridor is loud, but at other times it is noiseless. As regards other symptoms, the indrawing of the chest-wall and the episternal notch were well marked in four of the cases, but the alæ nasi did not move with the respiration, and there was a striking absence of distress or cyanosis. Variations in the intensity of the sounds were not uncommon and there were occasional intermissions, even when the condition was most constant and severe. The sounds were notably intensified by mental perturbation, more so, apparently, when the child was excited and apprehensive than when actually crying. Sleep seems to have no constant effect on the condition, and it does not cease when the tongue is depressed, nor even when the nostrils are closed; and when the child is taking the breast there is still sufficient air entering the nostrils to cause loud stridor. The effect of the ailment on the general health is not great, and the most effective treatment apparently is by regulation of the diet and other general precautions. Dr. Thompson regards the condition as due to spasmodic muscular contraction, the cause of this being some central disturbance of function, and he considers it closely analogous in nature and etiology to ordinary speech stammering, both being the result of defect in the proper co-ordinating mechanism.—*Lancet.*

COLLAPSE AFTER OVARIOTOMY—TRANSFUSION—RECOVERY.

DR. LEONARD REMFRY.

Married woman, aged twenty-eight, admitted to Great Northern Hospital, October 12, 1892. Examination showed a large, rounded, fluctuating tumor of the abdomen, rising to within three inches of the ensiform carthlage; more prominent on the right side. Dr. Remfry operated. There were no adhesions. The tumor, which contained a dark grumous fluid, was for the most unilocular, containing but a few secondary cysts; the pedicle was broad and contained some unusually prominent vessels; these were first all tied separately and then the rest of the pedicle secured in the usual way, including the first ligature. The stump was returned perfectly dry. The patient took the chloroform well and the operation did not occupy more than forty minutes.

Five hours after the operation, the patient began to vomit and retch repeatedly and became restless. Temperature subnormal, pulse 120; restlessness and pallor increased and she complained continually of pain in the left iliac fossa; one and a-half hours later, the pulse 140, could scarcely be detected at the wrist. Ether and brandy were given hypodermically and champagne by mouth with no improvement; examination per vaginam proved Douglass' pouch apparently empty. The extreme collapse contraindicated surgical interference. Transfusion was resorted to as a last chance, salt and water (one and a-half drachms to the pint) at a temperature of 110° injected into the right median basilic vein. Two and a-half pints were injected with numerous short intervals. After half a pint had been used a distinct improvement was noted, which continued steadily; nutritive enemata were also an important feature of the treatment; the thirst was controlled by occasional sips of hot water. Eleven days after the operation she was practically well.

Dr. Remfry closes the report with the following remarks: "The case is a highly interesting one—first, because of the extreme collapse so gradually developed, and, secondly, because of the equally gradually-developed recovery and the efficacy of transfusion. What was the cause of the collapse? It is impossible to speak with certainty. Was it hemorrhage or was it one of those obscure disturbances of sympathetic origin? Against the theory of hemorrhage it is impossible to bring forward any one decisive argument. The following details should not, however, be lost sight of, as collectively they are important. (1) the special care with which the pedicle was tied and its bloodless appearance before the abdomen was finally closed; (2) the steady improvement under transfusion, without the occurrence of any further, even temporary, collapse; (3) the absence of the least resistance in Douglass' pouch; (4) the almost normal respiration throughout. I many add that beyond passing a sponge into the pelvis and feeling the left ovary with two fingers there was no manipulation inside the abdomen." —*Lancet, Nov. 26, '92.*

CHRONIC DYSPEPTIC STATES TREATED BY MENTHOL SPRAY THROUGH THE STOMACH-TUBE.

In the *International Medical Magazine*, November, Dr. A. L. Benedict reports several cases and says:

The technique of the administration of menthol through the stomach-tube is simple. The patient should be directed to take no food within at least four hours of the time of appointment and the last meal should be a light one. Lavage is practised in the ordinary way, using plain water or a weak alkaline solution of about the body temperature, and repeating the washing until the fluid returns free from shreds of mucus. The water is removed from the stomach by siphonage as completely as possible, stripping and shaking the tube to remove the water remaining in it. The contact of the tube with the walls of the stomach is apt to excite retching. Haste should be made, therefore, to distend the organ with the spray from the atomizer. The writer uses a one- to five-per-cent. solution in any of the colorless substitutes for the crude officinal liquid petrolatum. The form of the atomizer is a matter of indifference, as almost any of the cheap nickle-tube perfume atomizers will spray an oily solution. The spray is then directed into the funnel, a piece of cardboard being used to prevent a rebound of the vapor from the sides of the funnel, or the funnel may be removed and the tip of the atomizer introduced into the lumen of

the tube. For a minute or two the vapor from the atomizer will meet with some resistance from the small amount of water remaining in the tube, and on auscultation a bubbling may, at times, be heard in the stomach. The vapor, like the fluid previously used, should have an alternate ingress and egress. By pinching the tube close around the tip of the atomizer the stomach may be fully distended and it should then be allowed to contract upon its gaseous contents, when the vapor and even drops of water will be expelled with considerable force from the mouth of the tube. No better proof of the fact of the entrance of the spray into the stomach can be afforded than the almost invariable statement of the patient that the peppermint can be tasted in the mouth, which it can reach only by regurgitation through the œsophagus outside the stomach-tube or through the blood circulation. After having forced the vapor into the stomach, and having allowed the stomach to contract upon its gaseous contents six or seven times, it is safe to assume that the walls of the organ have become as thoroughly coated as would the pharynx or the nose after the same number of applications, barring the fact that the vapor has to follow a longer course and that the surface to be medicated is of much greater area.

The finely-divided spray of an oily solution of menthol distends the stomach symmetrically with little tendency to gravitate to the greater curvature and without straining the ligamentous and peritoneal attachments of the stomach. The vapor diffuses itself in all directions, touching almost every cell of the mucous membrane with a tiny oil globule holding in solution a small amount of menthol. In the aggregate, the clean surface of the stomach is coated with a medicated film of inert mineral oil. This film forms an antiseptic dressing for the mucous membrane, has little if any irritant action aside from the excitation of the menthol, and is, for the most part, brushed off by the first food which enters the stomach. The action of the menthol must be almost entirely local, for the oily solution, though strong enough to act on the mucous membrane, is not used in sufficient volume to make the constitutional action of menthol noticeable.

The value of the menthol spray has been so thoroughly demonstrated in the treatment of more accessible mucous membranes that it seems pardonable to report this new use of it without waiting for a longer series of cases or a greater lapse of time to speak more emphatically in favor of its local action in the stomach. The nine cases reported (and several others not mentioned in this paper) seem to show that the use of the menthol spray in cases of atony or catarrh of the stomach is followed by at least temporary benefit.

The use of other remedies in spray form is suggested.

PERCHLORIDE OF IRON IN PARALYSIS OF THE BLADDER.

Dr. G. S. Roads, in the *Massachusetts Medical Journal* (Nov.), reports the case of a man, æt. seventy-four, who had been subjected to attacks of retention of urine, which were formerly relieved by warm baths, etc. He was suddenly called, and found the patient suffering greatly from retention of urine, which was drawn off. An enlarged prostate was found.

The catheter was passed for several days until the urethra becoming very irritable and the patient rapidly getting into a typhoid condition.

There was not the slightest attempt at contraction of bladder.

He then injected into the bladder six ounces of a weak solution of tincture of iron, which was allowed to remain about half a minute. A slight contraction immediately followed, and small quantities of urine were passed during the day, voluntarily.

Improvement was then rapid, and he has had no trouble since (one year). There could be no doubt that the injection effected the cure in this case as no other medicine was given save a simple aperient.

CHRONIC DIARRHŒA WITH INTESTINAL FERMENTATION.

℞

Salol	ʒiij.
Castor-oil	ʒxv.
Syrup of rhubarb	ʒxxx.
Gum of acacia, enough to make emulsion.	
Distilled water	ʒxv.

M. Sig.: One tablespoonful every hour until the bowels move.

—*Le Prog. Mèd.*

Periscope.

THERAPEUTICS.

THE TREATMENT OF CHOLERA IN THE ALTONA HOSPITAL.

Dr. Du Mesnil has had under his observation about five hundred cases during the last epidemic. To destroy the bacteria *in situ* he administers calomel in seven-grain doses twice in the course of two hours, following with grain doses every second hour, believing this to be of more value than salol, creolin, or other cresol preparations. Further antisepsis he obtains with Cantani's tannin injection (10: 2000). To meet the indication presented by the abstraction of water from the tissues and thickening of the blood and the resultant symptoms, he employs the sodium chloride infusion injected into the veins. He stimulates the heart, when it is required, with camphor, makes use of baths, 90° to 96° F., and relieves vomiting and muscular cramps in legs by morphine. The morality, excluding the cases of diarrhœa when the diagnosis was not established, was fifty-eight per cent.—*Müch. med. Woch.*, 1892.

ARSENIC AS A PROPHYLACTIC.

Dr. C. E. Bryan, in his address as President of the Leicester Medical Society, stated that he had been led by a paragraph in the *Practitioner*, some ten years ago, to the effect that persons taking arsenic were insusceptible to vaccination, to try the drug as a prophylactic in scarlet fever. He believes that an epidemic was checked in the Leicester Workhouse in 1882, and mentioned that a year later, in a family in which one child had severe scarlatina, he put the other two children on arsenic, and they did not take the disease, though they continued to be about the patient until her death three weeks later. In another family a boy, aged seven, had scarlet fever, but the four other children, whose ages ranged from three to eleven, did not contract the disease, and the mother, who aborted during her attendance on the child, did not suffer. He also advanced some evidence suggesting the value of arsenic as a prophylactic against diphtheria and influenza. He gives gr. one-fortieth of arsenious acid in pill, or m ij of liquor arsenicalis, in mixture three times a day for the first week, and afterwards twice a day.—*Br. Med. Jour.*

THE ANATOMICAL CHANGES IN POISONING BY SUBLIMATE.

Dr. Andrea Calantoni presents a very thoroughly scientific and carefully prepared paper, based upon the literature and upon experiments in the laboratory, from which he deduces the following conclusions: The sublimate penetrating into the blood is eliminated by the kidneys (in a large part) and by the intestine, giving rise, in these organs, to changes of a necrotic nature. In the kidneys, a single large dose being followed by death in a few hours, no changes, save small hemorrhages in the inter-cellular tissues, are found. If life is prolonged from five to ten hours there is found cloudy swelling of the protoplasm; if still longer, epithelial necrosis is clearly shown. In some cases of subacute poisoning there is found a deposition of lime, but differing from the calcareous metastasis of Virchow, in that it is a calcification of single elements and not a secretion of lime from acute decalcification of bone or modification of diffusive power of the renal filter. In the intestine the alterations are chiefly found in the large intestine, and consist of hyperæmia, hemorrhage, and necrosis at the summit of the folds, presenting all the characteristics of a diphtheritic process. There is apparently no relation between the severity of the renal and intestinal lesions. The results of necropsy do not furnish a sure, but only a probable anatomical diagnosis.—*Giornale del. Assoc. Napolitana de Med. e Natur.* 1892.

THE USE OF STRYCHNINE AND DIGITALIS IN DIARRHŒA.

Mr. Harold Hendley notices that, in fevers of a remittent character, the complication of persistent diarrhœa occurred frequently, and at periods when the patient was worn out by fever and the digestive powers were rapidly failing, determined to use these drugs to combat certain symptoms. In these cases the temperature ranges from 1° to 1½° above normal, the pulse is soft and yielding, not very rapid, and markedly wanting in tone; the motions, four or five daily, increase in number until nourishment appears to excite an action of the bowels, marked by even a greater tendency to fluidity, the extreme being reached when the motions escaped involuntarily, and is followed by a tendency to cardiac failure, if not collapse, frequently accompanied by a consciousness

of approaching dissolution in the patient. Digitalis was chosen for these cases because of its well-known general action upon the vasomotor system, strychnine for its less-known more direct action upon that portion of the system concerned in the control of the blood supply to the intestines. The mixture employed was tr. digitalis, miv; liq. strychinæ, mij; spts. chloroformi, mv; in water, and repeated at from one to four hourly intervals.—*The Practitioner.*

THE TREATMENT OF CERTAIN REBELLIOUS HEMORRHAGES BY COUNTER-IRRITATION OVER THE SPLENIC OR HEPATIC AREA.

Dr. L. H. Pettit, calling attention to the close relationship which exists between spontaneous hemorrhages and chronic diseases of the liver, regards the logical treatment of this symptom to be the application of counter-irritation over that organ. *En résumé:* in the event of an abundant spontaneous hemorrhage, or if it is repeated, it is necessary to examine with care the condition of the liver, spleen, and kidneys, and if these organs are diseased it is indicated, at least as far as the liver or spleen is concerned, to apply a cutaneous revulsive more or less energetically in these regions—either blisters or the actual cautery. A milk diet is indicated in the case of nephritis. Perhaps it is advisable that we should also employ digitalis in hemorrhages due to cardiac disease. The intensity of the necessary revulsion varies according to circumstances; in some cases vesication for an hour is sufficient, in others energetic and repeated applications are necessary. —*L'Union Médicale.*

VERATRUM VIRIDE IN PNEUMONIA.

Let me recapitulate. Don't bleed unless you want to. You will occasionally lose a patient, perhaps, by not doing so, but never mind. Maybe he would have died anyway. Don't give antimony unless you feel like it, or a calomel cathartic either, but give veratrum, whatever else you do, and don't get worried when your patient's pulse gets down to sixty or thereabouts, but just hold it there and keep the heart from forcing blood into the inflamed lung at such a terrific speed. Some authority, that I can't lay my hand on just now, says that there is no more reason for controlling the circulation with an inflamed lung than with the inflamed Peyer's glands of typhoid fever. Don't you believe it. The pulmonic circulation is one-half that of the entire body, and anything you can do to lessen the engorgement of lung tissue will diminish the chances of your patient's dying of heart-failure from lack of proper æration of the blood, and will hasten resolution, vagus or no vagus. But don't give opium.

Finally, permit me to say that with this method you have a positive treatment, so simple and so plain that the wayfaring man, though a diabolical idiot, can understand it, and it means business. And, further, allow me to add that, if you permit your patients to die with uncomplicated pneumonia, somebody is to blame, and an action for malpractice should stick on you quicker than in case of death from lack of the use of antiseptics in midwifery.

Lastly, this is not an idle fancy or a theoretical problem, but a hard and horny-handed fact, proved, not by a few years of hospital training, supplemented by a diaphanous general practice, but by over a third of a century of rough and blistering experience in active practice, where pneumonia was one of the commonest diseases, and I can say with truth, as before intimated, that during all these years I have never lost a single case where the disease was uncomplicated, and very few that were. Furthermore, I never expect to. When gentlemen can formulate a plan productive of better results, it will be time for me to consider it.—*E. B. Ward in American Lancet.*

MEDICINE.

EMPYEMA.

Herz (*Centralbl. f. klin. Med.*, October 15th, 1892) maintains, in reply to Rudolph (Epitome, May 28th, 1892, par. 468), that, except in some unusual cases, resection of a rib complicates the operation as washing out the pleural cavity does the after-treatment. The delicate pleuritic adhesions by which the re-expansion of the lung is maintained are broken down by the washing out and the recovery delayed. Any masses of lymph find their way out through a sufficiently long incision kept open by two drainage tubes, or

are absorbed without retarding recovery. The washing out is said by Rudolph also to exert a certain influence in producing deeper respiratory movements, and in thus favoring the more rapid re-expansion of the lung, but the same effect can be brought about in other ways. It is also stated that the washing out cannot be omitted in cases of fœtid empyema, but Herz points out that a thorough disinfection of the parts is not possible, since the infective process is not limited to the mere surface of the pleura. A case of fœtid empyema is then reported in which the patient died of cardiac failure six days after the operation. No rib was resected, and no washing out practised, and yet the empyema cavity has contracted so as to hold not more than 30 c.c. Fine pleuritic adhesions were found all over the rest of the lung. No cause for the fœtid character of the empyema could be found. There was dilatation of the heart, and marked fatty degeneration of its substance. This case shows that fœtid empyema may be cured by simple incision. It is not by the formation of granulations nor yet of masses of lymph, that recovery is brought about, but by the formation of these adhesions.—*Brit. Med. Jonr.*

CONVULSIONS IN CHILDREN.

Safe rule in all cases to see that stomach and alimentary canals are emptied. For this, give a full dose of ipecac, repeating in ten minutes if necessary. If this fails to bring on vomiting, tickle the fauces till successful. Give a copious enema and follow with a half-ounce dose of castor oil. After purging, give chloral till relief is obtained. For a child two years of age, ten grains in a little water can be given per rectum. A child one year of age will stand half the quantity. Morphine may be used if the convulsions are due to uremia. If scarlet fever or measels is coming on do not purge too freely, as it delays eruption. The popular hot bath should be used with caution. If the cause of the convulsions is the advent of an infectious disease it may do good, as it brings the blood to the surface of body and relieves internal congestion. If the convulsions are due to central lesions, when treatment is of no avail the hot bath may possibly be used for the consolation of the patients.—*Ex.*

ON THE TREATMENT OF CROUP.

Pilière read a paper on this subject before the Paris Academy of Medicine. After the year 1880, said the author, he treated with the greatest possible success all the diphtheritic forms of the disease in the following manner:

He washed out the pharynx morning and evening with a cotton brush dipped into a solution of nitrate of silver of 1:30 strength, detaching as much as possible of the false membrane. After each washing he atomized a solution of corrosive sublimate into the throat, using in cases of children above two years old 1:500 solution, and below that age 1:1000, These pulverizations of the corrosive solution have been repeated every two hours during the day and every three hours during the night. Never in his hands has any accident or mercurial poisoning been constant or fatal.—*Le Scalpel.*

DIPHTHERIA AND MEMBRANOUS PHARYNGITIS.

Diphtheria.	Membranous Pharyngitis.
1. It is not common after puberty.	1. It is most common after puberty: not often met with in young children. Mackenzie says tonsillitis is more common between fifteen and twenty-five than any other age.
2. The prostration and sense of illness is marked, although the temperature be little elevated and the throat symptoms slight. Briefly, general symptoms more marked than local.	2. The prostration and sense of illness is usually not marked, although the temperature be very high and the throat symptoms severe. Briefly, the local symptoms are more marked than the general.
3. Albuminuria is common.	3. Albuminuria is very exceptional.
4. The edges of membrane are thin and ill defined, and shade off into surrounding tissue. on peeling membrane a bleeding surface is left.	4. The edges of membrane are steep and well defined, terminating abruptly. On peeling membrane no bleeding or excoriation.
5. Uvula commonly involved.	5. Uvula rarely, but may be involved.
6. Membrane does not dip into follicles. (Flint.)	6. Membrane may be seen dipping into follicles. (Flint.)
7. No follicular ulceration co-existent. (Schech)	7. Follicular ulceration present frequently. (Schech.)
8. The tongue at outset is not usually characteristic.	8. The tongue at outset is frequently characteristically coated with thick yellow-white fur.

—*Australasian Med. Gazette.*

THE INFLUENCE OF THE MIND ON THE BODY.

In an article entitled "Psycho-Therapeutics," which Wm. Dale, M. D., of London, contributes to the *London Lancet*, he presents many interesting suggestions.

Fear, anger, revenge, grief, love, hope, joy, friendship, may all effect physical condition.

As illustrative of the belief in this theory, so early a writer as Churchill says:

> The safest way to health, say what you will,
> Is, never to suppose we shall be ill;
> Most of the ill that we poor mortals know,
> From doctors and imagination flow.

The efficacy of strong emotion in producing, or in helping to produce, such conditions as diabetes, chorea, and epilepsy, is well recognized, and, we venture to say, undoubted; but it is always difficult to estimate correctly the influence of such accidents, or to say how much may be due to them and how much to an underlying instability which such a disturbance merely makes evident. That a depressed physical and mental condition also renders the bodily organs more susceptible to the influence of some poison, such as that of the specific fevers, is well recognized; and when the inseparable connection between mind and body, and the profound alterations which fear or joy bring about in (for example) secretory organs, are taken into account, it is not surprising that violent emotion should, as it were, open the gate to allow the admission of sundry toxic influences.

It is an interesting question how much of the general—but by no means invariable—immunity which medical men enjoy from infectious disease is due to the calmness and unconcern with which they regard such disease in relation to themselves. They forget to be afraid, and so they are clothed with an invisible and often an invulnerable cloak.

It appears, then, that Faith and Hope are the two great principles which the physician must encourage to seek to evoke in his patient. The disease to which man is liable may be looked upon as so many enemies which lay siege to the citadel of his life, and often he is so fiercely assailed by them that he finds no help or defense in himself; and it is then that the physician, coming to his rescue with the powerful allies Faith and Hope, may perchance create within him a courage which will enable him to make, at least, a brave stand against his foes.

DIET IN DIABETES.

The following rigorous diet is recommended by Dujardin Beaumetz of Paris: Eggs, fish, meats of all kinds, poultry, game, oysters, fish and cheese.

All green vegetables are permitted except beets, carrots and beans.

Fatty foods are recommended, such as sardines in oil, herring, lard, goose-grease, ham-fat and caviar.

All soups are permitted, when made of meats in combination with cabbage, poached eggs and onions. Put no bread or toast in the soup.

Only dietic breads are to be used and saccharine in place of sugar.

All starch foods are strictly forbidden, as sweet fruits, pastries and chocolates.

Patients may drink claret wine diluted with Vichy, but no poor wines, liquors or spirits.

Daily exercise morning and evening in open air; fencing and gardening and other light exercise.—*Medical Mirror.*

VALVULAR LESIONS OF THE HEART AND PULMONARY TUBERCULOSIS.

Lannois (*Revue de Médecine*, 1892. No. 10, p. 830), calls attention to the infrequency of the association of valvular disease of the heart and pulmonary tuberculosis in the same person, and reports an illustrative case. A blacksmith, thirty-nine years old, had had an attack of enteric fever at the age of five, followed by convulsions; at seventeen, an attack of acute articular rheumatism, with pericarditis; at twenty-three, a second attack of rheumatism, with endo-pericarditis; three years later, a third attack; and three years later, a fourth attack. From the age of eighteen years he had had a winter cough. Following the last attack of rheumatism the appetite had failed, strength and flesh had been lost, and albumin had appeared in the urine. The respiratory murmur became enfeebled below the clavicles; sonorous râles were heard posteriorly and at the bases, while the cough developed sibilant râles. The patient became ill at ease, felt slightly feverish, and took to bed. It was found that the temperature was 105°. Oppression of the chest set in. The sputum became nummular. Sibilant and subcrepitant râles were to be heard. The number of respirations was increased. Dyspnœa became marked and aphonia appeared. The patient grew progressively worse and finally succumbed. At the

post-mortem examination the right pleural cavity was found obliterated by adhesions. Both lungs were congested. Beneath the pleura numerous gray granulations were visible, while the anterior margins of the lungs were emphysematous. On section, granulations, some of which were caseous, were found throughout both lungs, but in greatest number at the apices. The glands at the hilus of the lung were enlarged, but not caseous. The kidneys contained numerous miliary tubercles. The spleen was enlarged, the liver fatty. The heart was bound to the pericardium by old adhesions. Neither the organ nor its serous sac presented evidence of tuberculosis. Both the aortic and the mitral leaflets were thickened and the two valves were manifestly incompetent.—*Amer. Jour. Med. Sci.*

PRIMARY CARCINOMA OF THE COMMON BILE DUCT.

May (*Münch. med. Woch* , August 16th, 1892) reports the following case in a man aged 67: who was said to have suffered formerly from renal colic. In the winter of 1890 he had influenza, and since then cough and dyspnœa. There were no hepatic symptoms, and he had never had jaundice. About six months later he had symptoms which were apparently due to myocarditis and cardiac dilatation. The liver was then noted as enlarged. In January, 1891, he lost his appetite and began to waste considerably. Jaundice, which had been present for a short time, became intense. It was often thought that this was the result of something more than mere back pressure, but the supposition could not be proved. Later there was general dropsy. In February, 1892, he was suddenly seized with intense pain in the right hydochondrium and vomiting. He died of collapse in two days. The heart was found to be enlarged and dilated, and the substance degenerate. There was suppurative peritonitis. There were a few small stones in the gall bladder, the walls of which were perforated in the one place. Similar stones were found in greater numbers in the cystic duct, and also in the much-dilated common bile duct. At the opening of the latter into the intestine there was an annular mass of new growth, which partly projected into the lumen of the gut. The liver was enlarged, of a dark green color, and contained secondary deposits of columnar carcinoma. Schüppel says that the characteristic symptoms of this disease are steadily increasing jaundice, showing no improvement, along with symptoms of biliary stasis and hepatic enlargement, but that often the diagnosis is almost impossible. The disease here lasted apparently about a year. Most of the recorded cases have died of pneumonia. It would appear from this case that gall stones play a part in producing carcinoma. Of nine reported cases, however, gall stones were only present in one, and then they were still in the gall bladder. The author calls attention to the well-marked but passing benefit to the appetite produced by orexin in this case.

ITCHING IN SCARLET FEVERS.

This is not always agreeable, but it has never been supposed to be a favorable sign, yet St. Phillippe (Rev. Mens. de Mal de Lienf., February, 1890) presents the fololwing conclusions:

(1) Scarlatina is a disease which is often accompanied by itching. (2) This variety usually has a favorable prognosis. (3) The itching is due to the fact that the eruption is not intense and the cutaneous lesions not very profound.

A good application for the relief of this itching is the following:

℞ Campho-phenique..... ʒ ss
Albolene unguent..... ʒ ss.

M. Sig.: Apply night and morning.

Another advantage is that it is in the direction of personal disinfection.—*Archives of Pædiatrics.*

SURGERY.

THE RADICAL CURE OF INGUINAL HERNIA IN YOUNG INFANTS.

Until quite recently the general teaching of systematic writers on the subject has been adverse to operating for the radical cure of hernia in very young children. Berger, for instance, basing his opinion upon the frequency of cure by the bandage, deprecated operation upon such subjects. More recent writers, however, have brought forward evidence to justify this operation without reference to the age of the child. Félizet, in his thesis (1891), has reported a successful double operation

upon a child of eight months, the interference being necessitated by the enormous size of the hernial tumors. Broca (*Revue mens. des Maladies de l' Enfance*, April, 1892) does not hesitate to operate after the age of three years, and his seven observations show that the operation itself is not a grave one, and its results can be compared to those obtained in adults. Below the age of two years he does not think operation is justifiable, because the phenomena of strangulation are never grave, and, moreover, antisepsis is difficult to maintain. Karewski (*Berliner klinische Wochenschrift,* March 18, 1891), however, thinks that scrotal hernias can be radically treated without danger, even in infants of the tenderest age. Of the nine children upon whom he thus operated, the youngest was nine months and the oldest two years and three months. In none of these case did relapse occur, and all recovered without accident. The most recent report of cases comes from Phocas, of Lille (*Le Mercredi, Médical*, 1892, No. 29, p. 341), who gives the notes of two operations, one upon a child of fifteen months, the other upon an infant of four months, both of which gave eminently successful results. This author puts himself in line with the operators already quoted; but he is disposed to believe the conditions changed when the radical operation is practised as the termination of a kelotomy for strangulated hernia, for in this case the tissues are infected and the child in a depressed state; and he considers these facts as warrant for refraining from operation in case of strangulatlon in children under two years of age. Such a decision, moreover, seems justified by the fact, noted by all observers, that strangulation at this age is a relatively benign accident. In many cases simple taxis is sufficient, and sometimes the condition yields spontaneously. Nevertheless the diagnosis of strangulation is surrrounded by so many difficulties in these very young subjects, that statistics have little weight. On the other hand, the existence of a hernia, which cannot be satisfactorily controlled by any of the palliative means, is a source of so much annoyance and suffering to the infant that measures for radical relief are, in many cases, peremptorily demanded. The operation promises better success, of course, when practised in the absence of strangulation, and the author would not hesitate to reduce a strangulated hernia by taxis, waiting for a more favorable time to attempt the radical cure. As a general rule he believes it to be sufficient to extirpate the peritoneo-vaginal canal, whose abnormal persistence is the sole cause of this hernial defect.—*Amer. Jour. Med. Sci.*

TREPHINING FOR RELIEF OF INTRACRANIAL PRESSURE.

That in cases in which an intracranial growth is present much relief is at times given by trephining is now well known, but the number of cases as yet reported is too small to allow of its being recognized as a certain, and at the same time, a safe means of treatment. Such treatment, of course, is only applicable to cases in which either the new growth is too large for removal, or its locality cannot be definitely diagnosed. As regards growth in the cerebellum, clinical observation is still at fault. While in some cases it may enable us to say with a fair amount of definiteness that there is a cerebellar tumor, in very few can it be predicated on which side of the cerebellum the growth lies. Every recorded case, therefore, is of extreme importance, as enabling a judgment to be formed of the difficulties and drawbacks which follow such an operation, as well as of the relief experienced and the nature of the cases in which the operation may be expected to have a favorable result. In the *Journal of Nervous and Mental Diseases*, Dr. Knapp, of Boston, reports a case in which diagnosis was very difficult, and in which an operation was undertaken chiefly for the purpose of relieving symptoms resulting from increased intracranial pressure. The patient had been fairly well till October, 1889. He then began to suffer from occasional severe headaches, and at times dimness of sight. He was seen at this time to have double optic neuritis. He lost the sense of smell early in the illness, and became totally blind in August, 1890; but on one occasion, after a severe attack of vomiting, he is said to have had a temporary return of vision. He was seen by Dr. Knapp in October, 1890, and then he had for three weeks complained of failure of hearing in the left ear, had experienced some difficulty in swallowing, and there was a profuse flow of saliva. He had also had on two occasions attacks in which he cried

out, fell down, and frothed at the mouth. He likewise had sensations of numbness of the face and hands, but tactile sensibility was fairly good. He suffered from headaches, and was restless and slept badly. There was pain on pressure on a spot in the right temple. Sometimes neither knee-jerk could be obtained; at other times only the right was present. Trephining was advised, and was performed on Jan. 18th, 1891. Bone was removed in the right parietal region, just behind the anterior end of the fissue of Sylvius. There was bulging at the opening; but no tumor was felt or seen even after the opening had been considerably enlarged. After the operation he was more comfortable, although not quite free from headache, and at his own request he returned home on Jan 28th. He returned a few days later, apparently suffering from left hemiplegia and hemianæthesia, and he remained in a very solmnolent condition of some days. There was oozing of blood from the posterior end of the incision which had apparently broken down, and later on some brain substance came away On Feb. 14th he became almost comatose but a profuse watery discharge from the wound set in, and he began to improve There was no change in the condition of the hemiplegia, or any sign of returning vision, but his mind was much clearer The hernia, however continued to slough, and on March 7th he suddenly became worse, and died on the 9th. At the necropsy there was found signs of meningitis around the trephine opening, and a large tubercular tumor in the left lateral lobe of the cerebellum. Of course, in such a case operation was a forlorn hope, for there was little probability that even vision could have been to any extent restored, and it was also a misfortune that breaking down of the scar should have occurred with the consequent hernia cerebri; but the temporary relief from pain, although brief, is significant.—*Lancet.*

FIXATION OF CATHETERS.

Pilz, of Vienna, describes an ingenious and apparently efficient way of fastening catheters used for continued drainage of the bladder when passed per urethram. It consists of inserting the catheter in the usual manner so that the "eye" is just inside the internal sphincter; the catheter is then transfixed with a pin at its point of emergence from the meatus, which prevents its entering farther into the bladder. It is kept from slipping out of the urethra by a strip of adhesive plaster passed over the pin and the ends fastened to the dorsal and ventral surface of the penis. These latter are prevented from slipping by other strips circularly applied, which also, it is claimed, prevent erection. Lauenstein, in cases of perineal section, fixes the catheter by a ligature passed through it through the perineal wound. The ends of this ligature are then tied over the iodoform gauze tampon which lies in the perineal wound, and thus fixes the catheter.—*West. Med. Rep.*

USE OF NITRATE OF SILVER IN URETHRAL INFLAMMATIONS.

Dr. R. Guitéras (*Journal of Cutaneous and Venereal Diseases*) says:

Nitrate of silver is not dangerous in acute urethral inflammations as is generally supposed.

By beginning with small doses and increasing daily a tolerance can be established (the same as in chronic cases).

Although a solution of the strength of 15 or 20 grains to the ounce can be reached in this way, it is not wise to go above 8 or 10 grains; and then if the result is not favorable to continue with some other means.

In this, as in bichloride irrigations, and all other methods which try to cure this trouble quickly, a dry, congested and slightly irritated condition is liable to follow, which should be treated for some days by mild astringents, these to be left off gradually.

When the discharge becomes very slight, it is better at times to decrease the strength of the arg. nit. than to increase it.

In cases of gonorrhœal cystitis, which are usually acute, good results are obtained by instillations of this drug.

In cases of chronic deep urethral inflammations, especially those of a granular nature, deep urethral injections are the remedy *par excellence.*

Nitrate of silver as an abortive should not be used, as in doing this peri-urethral inflammations may be set up, which might cause considerable trouble.

ISOLATED HERNIA AND STRANGULATION OF THE APPENDIX VERMIFORMIS.

Thiéry (*Bull. de la Soc. Anat. de Paris*, July, 1892) reports a very rare, if not unique, case of isolated hernia of the vermiformis. A man, aged 58, came under the care of M. Verneuil with a very large, tense, and painful swelling in the left groin. This swelling had been noticed for eight months, but could always be readily reduced until three days previously, when in a brisk movement the man was suddenly seized with pain in the affected inguinal region. Subsequently he vomited frequently, but up to the time of admission his bowels had been frequently relieved, and gas could be passed by the anus. On incision of the inguinal swelling, which resembled in every respect a strangulated hernia, it was found to be made up of numerous layers of brownish, infiltrated and friable tissue. At the bottom of this thick mass a small cavity was opened, which contained a small quantity of fluid with a strong fæcal odour. On opening up this cavity which proved to be a narrow peritoneal sac, a gangrenous cord was exposed, which, after section of the constricting neck of the sac, was traced upwards and found to be the distal portion of the appendix vermiformis, measuring about 8 inches in length. This had been tightly strangulated at the junction of the inferior with the middle third. It was gangrenous below the constriction and perforated at its extremity. A ligature was put around the appendix close to the cæcum, and nearly the whole of the process was removed. The infiltrated structures forming the bulk of the inguinal tumour were carefully dissected away. The patient made a good recovery. —*British Medical Journal.*

THE RESULTS OF 572 TRACHEOTOMIES FOR DIPHTHERIA.

Habs (*Deutsche Zeitschr. f. Chir.*, Band xxxiii., Heft 6) reports 572 cases of tracheotomy for diphtheria, with 316 deaths, or a mortality of 55¼ per cent., extending over a period of six years, and showing a decrease of nine per cent. between the first and last periods of three years each. The operation was most seldom performed in April, May, June, July, and August, and during these months the percentage of mortality was likewise the least. It increased gradually from that time, reaching its maximum in March, then decreasing. The average length of treatment was sixteen to twenty days. The most children died in the first five days after the operation, nearly as many dying on the fourth day as on the day of operation; then the danger decreases till the eighth or ninth day, when pneumonia is to be feared as a cause of death. A relatively good prognosis can therefore be given in those cases in which the patient passes the fifth day, except where intercurrent complications appear. The best cases are those in which, after the operation, the breathing is free, no membranes are found, the pulse good, fever slight, and little albumin is present in the urine; while those cases are unpromising in which the breathing is not free, where slight retraction of the chest walls continues, and deep-seated membranes or a tendency to pneumonia are present—yet they are not hopeless, and, on the other hand, even in the most hopeful cases there are the secondary sequelæ to be feared.

The mortality is very high in the first two years of life, then falls, rising again during the sixth and ninth years to forty per cent., and after the tenth rising again to fifty-nine per cent.; this is to be accounted for by the severe type that attacks older children. There is a greater percentage of deaths among male children than among female, and also more males are attacked by the disease.

[These results, which seem to show a percentage of recoveries of 44¾ per cent., are more favorable than are usually obtained in this country, where I believe the the figures show 28 to 33 per cent. of successes. It is probable that H.'s cases were operated upon at a very early stage, as hospital patients abroad usually submit more promptly and unquestioningly to surgical measures than in America.—J. W. W.]—*Amer. Jr. Med. Sci.*

PROSTATECTOMY.

The following new method in prostatectomy is described by Tobin (*Medical Press*, September 21, 1892). After supra-pubic cystotomy has been performed, and the diagnosis of enlarged prostate confirmed, a straight urethral écraseur is passed *per urethram* until the point touches the pros-

tate at the level at which it is desired to operate; the wire loop is then opened and made to encircle the portion to be removed, an incision being made with scissors if required; the loop is then kept imbedded by two fingers passed through the abdominal wound, and, guided by them and the écraseur, cuts in the plane desired. The lateral lobes may be removed in like manner, incisions being made if required for the passage of the loop. The author claims the following advantages for this method: "1. As much of the gland as interferes with the escape of urine is removed, and no more. 2. Such portion is removed in a satisfactory manner, for the wire cuts up to the portion where the instrument has been stopped by the obstruction. 3. A smooth surface sloping into the urethra is left, instead of the more or less rough one that must result from taking away the gland piecemeal with a forceps. 4. There is very little hemorrhage." He also recommends the Trendelenburg position, and reports a case of recovery with perfect function in the sphincter, and no re-obstruction after six months.

OBSTETRICS.

CONVULSIONS AT SIXTH MONTH: NO PREMATURE LABOR.

Puech *Nouv. Montpellier Mèd.*, No. 31, 1892) attended a primipara, aged 23, who was admitted into hospital for severe eclampsia during the sixth month of pregnancy. There seemed no tendency to delivery. She was at once placed under chloroform for three hours, but every time the administration was slackened convulsive movements began. Afterwards a severe convulsion set in, followed by coma. As insensibility became profound, free venesection from the arm was practiced; at once the patient's condition improved, respiration became less embarrassed, and the temperature fell from 103.6° to 101°F. an hour after the bleeding. Chloral was given, and the patient steadily improved. Albumen, which at first abounded in the urine, at length almost disappeared, the patient completely regained her senses, and the fœtal heart sounds were found to be still audible. When the report was published, there seemed every chance that the patient would continue her pregnancy to term.

THE MORPHOLOGY OF BREAST MILK AND THE NUTRITION OF THE CHILD.

An extensive study by Ivanhoff (*Thése de St. Petersburg, 1890*) of this subject led him to the following conclusions.

1. The cellules of colostrum are of epithelial origin.
2. The multiparæ colostrum changes to milk more rapidly than in primiparæ.
3. Puerperal diseases retard the disappearance of the colostrum corpuscles.
4. These corpuscles reappear in the milk after ten months of lactation, and when the infant is only partly fed from the breast.
5. The free hyaline corpuscles, as well as those which are enclosed in the fatty globules, form a constituent of normal milk at a certain period of secretion.
6. Good health, good nutrition, and youth in the mother give a milk richest in fatty globules of large size, as is also true of the cellules.
7. The last portion of milk taken at a feeding holds fewer globules, and these of smaller size than the first portions.
8. The estimation of the nutritive quality of milk should be based upon the number of fatty globules; and, secondarily, upon their size, the quantity of cellular element, and, finally, upon the quantity of granules.
9. Milk which contains a very large number of fatty globules (more than 3½ per cent.) is not well borne by very young infants.
10. Milk, the globules of which are large, is less nutritive and less well borne.
11. The maximum of daily increase of weight of the child is produced by milk which contains a mean quantity of fatty globules of medium size (27.7 grammes daily).
12. The milk which contains few fatty globules gives little increase of weight (16 grammes daily); and the same is true if the fatty globules are in too great quantity or are too large (19 grammes daily).
13. Women who are thin and young in general are the poorest nurses, often making the children dyspeptic and giving them a mean daily increase of weight of only 11.5 grammes.
14. The microscopic examination of a freshly secreted milk gives a sure indication of its nutritive value.

FEVER IN RECENTLY DELIVERED WOMEN.

Crouzat (*Midi Mèd.*, July 9th) strongly advocates the popularisation and general diffusion of complete antisepsis from the first in all labors, however simple; otherwise a strong, healthy young woman may often be lost, and for such a loss the obstetrician or midwife is responsible. Crouzat describes a sad case of this kind. The patient, aged 26, was naturally delivered on the night of May 29th; the placenta came away entire, and she did well till the second day, when rigors and fever set in. The abdomen became distended. The blood drawn from the patient's finger was full of streptococci, and set up erysipelas when inoculated into a rabbit's ear. The patient died on June 6th. The uterus was fixed by solid inflammatory deposit which filled the fornices. The public and the profession must understand that "milk fever" does not exist. A rise of temperature of over 100° in a patient delivered within two or three days should at once awaken suspicion of puerperal infection, and rigorous antiseptic treatment will at once be needed. Yet, with the greatest skill and care, the patient may be lost. Hence it is the duty of the obstetrician to prevent any chance of such rises of temperature by taking strict antiseptic precautions in the conduct of all cases of labor.

MISSED ABORTION: OVUM RETAINED ELEVEN MONTHS.

Budin (*Nouv. Arch. d'Obstét. et. de. Gynéc.*, October, 1892), read this case at a meeting of the Obstetrical Society of Paris in July. The patient, aged 24, was a married Russian medical student. The last period, very profuse, was seen at the end of June, 1891, then her first pregnancy began. Morning sickness was severe. Early in November, when starting for France, she was upset out of her carriage into a river. She felt no shock, and continued her journey. At Berlin, pains set in, with "show." When she reached Paris the symptoms of miscarriage increased. After fifteen days' rest she got up. Slight hæmorrhage became almost constant. On March 28th, 1892, Budin examined her, and diagnosed retention of the dead ovum. The patient was watched; on June 14th a gum catheter was passed into the uterus. Contractions were set up next day by the introduction of a pig's bladder into the vagina, gradually distended with water, and held in place against the upper limits of the vagina by an air pessary. Pains set in, followed by great excitement, and then lethargy. The bladder was therefore removed four and a half hours after its introduction. Injections of sublimate were thrown up, uterine contractions became severe, then the alarming symptoms recurred. Some old decomposed clots came away, and early next morning a great fleshy mass was expelled. A rigor followed, but thenceforward the patient did well. The fleshy mass was the ovum long blighted by hæmorrhage. The fœtus had been completely destroyed. Amniotic and placental tissues were detected by microscopic examination.

GYNECOLOGY.

PRIMARY CANCER OF LABIUM.

Zeiss, of Erfurt (*Centralbl. f. Gynäk.*, No. 40, 1892) was consulted in 1887 by a robust woman, aged 38, the mother of three children. She had noticed a small tumor in the external parts for four or five months. For four weeks it had caused pain. It formed a swelling of the size of a hazel nut in the posterior part of the right labium minus; its inner aspect was ulcerated. The inguinal glands were not involved. Zeiss carefully amputated the entire labium with Paquelin's cautery. The microscope proved that the growth was cancerous. In 1889 she became pregnant, 1890, she bore a child, and when suckling it, a swelling developed in the left breast. It slowly grew, and in the summer of this year began to be the seat of lancinating pains, most marked in bad weather or during menstruation. In February, 1892, irregular flooding began. In August, exactly five years after the removal of the labial cancer, Zeiss examined her once more. She was very much emaciated. The cervix was partly destroyed by a large excavated cancer, the uterus could not be removed. The inguinal glands were not involved, the scar of the old operation wound on the site of the labium was healthy. The left breast was the seat of scirrhus with retracted nipple, and two axillary glands were enlarged. There was no evidence of metastatic deposit in the viscera.

A CASE OF VAGINISMUS.

About five months ago Mrs. N. M— called upon me, from New Jersey, with the following history: She had been married five months, had always enjoyed perfect health, although she was of a somewhat nervous disposition and anæmic. Quite soon after her marriage coition had become impossible. The accompanying pains were something intolerable at first, making, as stated, coition entirely impossible. There was no discharge, no leucorrhœa: defecation and urination were without pain and regular; appetite good.

Upon my request that a thorough examination of the parts locally would be necessary, she gladly consented, but doubted the possibility of a digital examination. As she lay upon my operating table, inspection showed nothing but a slight œdema and redness of the external parts. Upon my attempt to introduce my index finger, the muscles of the floor of the pelvis became suddenly perfectly rigid, the muscles of the thighs began to contract spasmodically, the patient cried and complained that I was causing her the most agonizing pain. No amount of persuasion could induce her to become quiet or calm, and as she became more and more hysterical I was compelled to desist from all further examination.

I had not even been able to separate the labia, nor had I been able to see the hymen, or what was behind it.

A second examination, a week after, was even less successful than the first. The pains had grown more intense, the parts so hyperæsthetic that even the clothes coming in contact produced great agony. Her condition was deplorable, and her marriage life was far from being a happy one.

There was no doubt that the existing symptoms were those of vaginismus, the cause of which I had not as yet been able to detect. Consequently it was considered best to anæsthetize her and act at once according to the existing lesions.

When perfectly under its influence, and the parts had thoroughly relaxed, my finger entered the introitus vaginæ without the least resistance. The uterus and vagina were explored, but nothing abnormal could be detected.

Nevertheless, a close ocular inspection revealed the following conditions: The hymen had been lacerated into four distinct parts, each of which was more or less triangular in form. On the apices of each of these a small hypertrophic nodular mass (like corns on the feet), of the most extreme sensitiveness, was detected. Naturally I resorted at once to the excision of the entire hymen. There was but little hæmorrhage; the resulting raw surface was left to cicatrize. A tampon of unguentum iodoformi was inserted into the vagina, large enough to distend the entire cavity thoroughly. Calling upon my patient the next day, I could realize at once the success of my operation as experienced by her countenance.

She could change the tampons and irrigate the parts with but little annoyance, except, as she states, a feeling of slight soreness. The introduction of tampons was continued for about ten days longer. The small wounds healed admirably. There was no more pain. She is now pregnant.

RUPTURED TUBAL PREGNANCY.

Mersch (*Centralbl. f. Gynäk.*, No. 44, 1892) not long ago exhibited a most instructive specimen before the Obstetrical Society of St. Petersburg. It was a tubal pregnancy discovered at a necropsy on a woman who had died of phthisis. The tubal sac had burst. The skeleton of the fœtus was found strongly adherent to the lower end of the mesentery. The soft parts had been almost completely absorbed. The entire process must have caused but little general disturbance, for there was no history of any serious illness excepting pulmonary disease.

NEWS AND MISCELLANY.

THE DISEASE OF INEBRIETY.

Statistics of persons arrested for inebriety, extending over long periods, will point to certain years in which a maximum in numbers was reached, followed by a retrograde movement back to minimum. This tide-like movement is sometimes clear, then obscure. Often it is marked by both epidemic and endemic waves, and is traced in the prevalence of inebriety in towns and cities, and in the reaction noted by temperance revivals. This psychologi-

cal ebb and flow was pointed out by Dr. Westphal in Sweden many years ago, and an interval of seventeen years was indicated as the time between the maximum and minimum periods of inebriety in that country. Shorter periods have been noted by other observers in different countries. Many very startling facts point to this wonderful cycle and drink orbit, and help to explain the strange temperance revivals which spring up and sweep over the country, dying away with the same mystery and suddenness. Such movements are undoubtedly the backward swing of high tides of inebriety. The histories of large cities and towns supply many startling confirmatory facts of periods of inebriety and intense temperance revivals following each other with a strange, fascinating mystery. Like the ebb and flow in politics, religion and the great social movements, these drink cycles or waves point to ranges of causes and conditions awaiting future discovery. While many of the causes of inebriety as seen in the individual are both preventable and curable, there are other unknown psychological and physical forces that control the form and direction of the inebriety of both sexes. Whatever inebriety is in Europe, or may have been in the past, it is in this country a brain and nerve disease, marked by mental and physical failure, exhaustion and central degeneration.—*T. D. Crothers, M. D., in North American Review.*

EVIL LITERATURE.

Bad readings do an immense amount of harm to the young, who are given to imitate these heroes of fiction or of theatre, above all whenever the publication or drama presents vice under attractive colors. Children cannot without danger read, nor see, nor hear everything; ignorance of evil is the best safeguard of a child's morality. The automation which is in each one of us, according to the deep observation of Pascal, is particularly inclined in childhood to reproduce acts the portrayal of which provokes emotion. That is why Plato did not believe that all sorts of fables indifferently could be told to children, and considered as detrimental to morality the tales of criminal deeds which the poets ascribed to the gods. The souls of youth, as their bodies, require a pure atmosphere, amid which they may develop in kindness, purity and courage.

The physicians and criminalists who understand the power of good and bad example would—with propriety — prohibit the press from parading in the newspapers the unhealthy outbreaks of society's moral infirmities, of its suicides and crimes; they fear, with cause, the effect of this publicity on the weak and sickly minds (for all the insane are not in the asylums), on the young men and nervous women. The details furnished upon the execution of suicides and crimes generally strike the mind and may awaken a spirit of imitation. This publicity, moreover, presents the very grave inconvenience of teaching the details of execution of criminal acts.—Translation from Louis Proal, in *The Summary.*

THE TREATMENT OF DELIRIUM TREMENS.

The author asked first, What was delirium tremens? Was it a morbid state, which was the issue of neurasthenia, or was it an effect of alcoholic poisoning? He believed it to be the latter, and that the disease arose from the cumulative specific action of the poison of the cerebral tissues through the alcoholization of the blood. Acting on this theory, he had aimed at eliminating the poison from the brain and nervous system, leaving the healing power of nature to do the rest. This was the view taken in 1854 by Dr. Alexander Peddie, who administered antimony. Dr. Kerr, however, has found liquor ammonii acetatis to satisfactorily fulfil the conditions most favorable to cure. The main point was to avoid the use of alcohol and opiates, chloral, and all narcotics. The best hope of cure lay in natural exhaustion inducing sound, refreshing sleep.

The differing results of narcotic and non-narcotic treatment were exemplified in the case of a publican, who, in his second attack, was treated with opium and bromides, and in his third attack only with liquor ammonii acetatis. In the former seizure the patient, aged 48, even after sleep, was so heavy, unrefreshed, and then violent, that it took four men to hold him. To save his life he had to be put

into a padded room in the work-house, where he raved till exhausted and procured sleep, his only beverage there being coffee. In the latter seizure, two years afterwards, he was treated at home, the only medicine being liquor ammonii acetatis, at first in drachm doses every hour; milk, beef-juice, broth, and coffee were given frequently. In about seventy hours he had a sound sleep for four hours, followed in four hours more by a spell of twenty hours' sleep. The latter attack was complicated with an epileptic fit. The recovery was quicker than from the previous attack. These were both typical examples of the graver form of delerium tremens. By a reliance on so safe a sudorific as liquor ammonii acetatis and suitable nourishment, we best fulfill the conditions of cure, as we hereby give the *vis medicatrix nature* a fair field and no favor. —*Thera. Gazette.*

BURNS OF THE EYES.

Dudley S. Reynolds (*Jour. Am. Med. Association*), after referring to the various substances, as quick-lime, ammonium, nitrate of silver, sulphate of copper, caustic potash, and fused metals, which may produce burns, and to the use of the chemical substances which may be utilized for neutralizing them; for instance, the free ablutions of vinegar, and followed by a weak lotion of chloride of sodium in the cause of caustic potash, condemns the practice of closing the eyes that are so affected. In his belief the use of oils, and especially castor oil, so much in favor with the profession, produces in all cases an increase of irritation. Whenever any mucous membrane is wounded, and it becomes necessary to make local applications to it, the chemical combinations of the fluid covering that membrane in its normal condition should be considered in devising the plan of treatment. Inasmuch as the conjunctiva in its normal state is constantly bathed in a fluid rich in chloride of sodium, this salt should enter into nearly all local applications designed to remove offending matters. In one case of a severe lyeburn of the eye, which had first been treated with the instillation of vinegar, Reynolds used with satisfaction the following lotion:

℞

Borate of sodium	ʒ iiss.
Chloride of sodium	ʒ ss.,
Distilled water	ʒ xii.
Camphor-water	ʒ iv.

The reporter considers that burns so extensive as to make it impossible to prevent adhesions between the lid and the ball may be greatly modified by leaving the eye open, and daily separating the opposed abraded structures with a probe annointed with a yellow oxide of mercury ointment. —*Ther. Gazette.*

The Trustees of the Methodist Episcopal Hospital, at the December meeting, elected Dr. Geo. E. deSchweintz and Dr. Alexander Randall, ophthalmologist and aurist, respectively, of the consulting staff of the Hospital.

DIPHTHERIA.

The following new combination is recommended by Ozegowski in the *Nouring Lekarskie:*

℞

Iodine Carbolic acid Citric acid	āā	3 to 5 grams.
Brandy enough to make		100 "

M. Sig: Apply on cotton compress to the diphtheritic membrane.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY FROM DECEMBER 11, 1892, TO DECEMBER 17, 1892.

Leave of absence for four months, with permission to go beyond sea, is granted Captain Peter R. Egan, Assistant Surgeon, U. S. Army.

The leave of absence granted Captain James D. Clennan, Assistant Surgeon, U. S. Army, is extended thirteen days.

Lieutenant Colonel William D. Wolverton, Deputy Surgeon-General, U. S. Army, is relieved from duty at Fort Schuyler, New York, and will report in person to the Commanding Officer, Watervliet Arsenal, West Troy, New York, for duty at that Arsenal.

Upon the recommendation of the Medical Director, Department of California, First Lieutenant Charles Wilcox, Assistant Surgeon, will report to the Commanding Officer, Presidis of San Francisco, for temporary duty at that post, until the departure from Angel Island, Cal. of Major William H. Gardner, Surgeon, when he will proceed to Angel Island, and report to the Commanding Officer of that post for temporary duty.

Leave of absence for two weeks on surgeon's certificate of disability, with permission to apply for an extension of two weeks, is hereby granted to Captain Adrian S. Polhemus, Assistant Surgeon, U. S. Army.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE FOR THE EIGHT WEEKS ENDED DECEMBER 10, 1892.

Purviance, George, Surgeon, detailed as chairman of Board to consider changes in uniform, Dec. 6, 1892.

Hutton, W. H. H., Surgeon, relieved from duty at Cape Charles Quarantine, to rejoin station, Nov. 29, 1892.

Hamilton, John B., Surgeon, granted leave of absence for six days, Nov. 18, 1892.

Sawtelle, H. W., Surgeon, granted leave of absence for seven days, Nov. 9, 1892.

Austin, H. W., Surgeon, detailed as member of Board to consider changes in uniform, Dec. 6, 1892.

Stoner, G. W., Surgeon, granted leave of absence for fourteen days, Dec. 9, 1892.

Godfrey, John, Surgeon, to proceed to the city of Mexico on special duty, Nov. 22, 1892.

Irwin, Fairfax, Surgeon, to proceed to Europe on special duty, Nov. 22, 1892.

Mead, F. W., Surgeon, detailed as recorder of Board to consider changes in uniform, Dec. 6, 1892.

Carter, H. R., Surgeon, relieved from duty at Cape Charles Quarantine to rejoin station, Oct. 20, 1892. Relieved from duty at Cincinnati, Ohio; assigned to duty at Norfolk, Va., Oct. 26, 1892.

Banks, C. E., passed Ass't. Surgeon, granted leave of absence for fifteen days, Oct. 24, 1892.

Glennan, A. H., passed Ass't. Surgeon, granted leave of absence for thirty days, Oct. 26, 1892.

Bratton, W. D., passed Ass't. Surgeon, granted leave of absence for thirty days, Nov. 10, 1892.

Cobb, J. O., passed Ass't Surgeon, granted leave of absence for sixteen days, Dec. 7, 1892.

Guiteras, G. M., passed Ass't. Surgeon, relieved from duty at Gulf Quarantine. Assigned to temporary duty at Baltimore, Md., Dec. 1, 1892.

Geddings, H. D., passed Ass't. Surgeon, to report in Washington, D. C., for special temporary duty, Nov. 30, 1892.

Hussey. S. H., Ass't. Surgeon, to proceed to South Atlantic Quarantine, for temporary duty, Oct. 26. 1892.

Perry, J. C., Ass't. Surgeon, when relieved at Norfolk, Va., to rejoin station at Mobile, Ala., Oct. 26, 1892.

Young, G. B., Ass't. Surgeon, granted leave of absence for twenty-one days, Oct. 27, 1892.

Stimpson, W. G., Ass't. Surgeon, to proceed to Baltimore, Md., for temporary duty, Dec. 5, 1892.

Gardner, C. H., Ass't. Surgeon, ordered to Portland, Or., for temporary duty, Oct. 25, 1892.

Nydegger, J. A., Ass't. Surgeon, to proceed to Gulf Quarantine for temporary duty, Dec. 1, 1892.

Strayer, Edgar, Ass't. Surgeon detailed as inspector of immigrants port at Boston, Mass., Nov. 22, 1892.

B & O'S NEW THROUGH LINE.

PREPARING FOR THE IMMENSE TRAFFIC INCIDENT TO THE WORLD'S FAIR.

The management of the Baltimore and Ohio Railroad is preparing for an immense business in 1893 while the World's Fair is open in Chicago. The terminals at Chicago are capable of accommodating a much heavier traffic than is now being done, and important changes are being arranged for the handling of very heavy freight and passenger business to the West from New York, Philadelphia and Baltimore. New equipment for largely increased passenger business and an extensive stock of freight cars have been ordered. The various roads of the system will be improved by straightened lines, reduced grades, extra side tracks, and interlocking switches. The new line between Chicago Junction and Akron has shortened the distance between Chicago and tide water twenty-five miles, and between Pittsburg and Chicago fifty-eight miles.

The distance between Chicago and Pittsburg and Chicago and Cleveland by the construction of the Akron line and the acquisition of the Pittsburg and Western line and the Valley Railroad of Ohio, is about the same as via the Lake Shore from Cleveland to Chicago, and by the Pennsylvania from Pittsburg to Chicago. The alignment is to be changed and grades reduced to a maximum of twenty-six feet. It is expected that in twelve months the old Baltimore & Ohio through line between Chicago and the Atlantic Ocean will have passed away and the new line via Pittsburg be established, with no greater grades or curvature than on any of the trunk lines.

Work has already begun east of Pittsburg to meet improvements making west of Pittsburg. These improvements will consist of additional second and third tracks, a general correction of the alignment, and completion of the double track on the Metropolitan Branch. It is expected that the new through line will be ready simultaneously with the completion of the Belt Line through the City of Baltimore, which is intended to unite the Washington Branch with the Philadelphia Division and do away with the present line via Locust Point. Forty new and powerful locomotive engines were added to the equipment during the last two months, and others are in process of construction. The permanent improvements now under way and in contemplation involve the expenditure of some five million dollars. —*Baltimore American.*

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THE
MEDICAL AND SURGICAL REPORTER.

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Original Article.

MOTIVE, PREPARATION AND RESULTS IN ABDOMINAL AND PELVIC SURGERY.

By JOSEPH PRICE, A. M., M. D.,

My motive in coming here is not so much to impart as to gain information. I know the value of contact, of close and intimate association with the zealous working men of the profession. Our talks, generally, have much that is very crude in them for which we need not pause to apologize.

There is a growing conviction in the profession that every surgeon must stand on his own legs. In medicine and surgery there are no Blue Laws—no geography fixing the limits of advances. There will always be a pressing need to make our science and art better. There is not much in that physician or surgeon who is content with his little store of scientific knowledge, with the results of his observations and experiences however extended and successful. He would serve better in redeeming some old sedge field to productive agriculture than in the field of medicine and surgery. Those men learn most who feel most the gravity of their responsibilities, the issues involved in their work; and who zealously seek through every avenue of observation, investigation and research for that knowledge and art, those combined agencies, which will make their work the more successful.

Many of our countrymen travel from the extreme borders of our forty-four commonwealths to our medicalcentres for the lessons they can gain in laboratories, hospitals, and public and private clinics. This spirit of improvement promises much for the future of medicine and surgery. It would be very discouraging to feel that our present surgery could not be out-done. The tendency is to break away from all traditions, rules-of-the-thumb maxims,—to drop all reverence for fossil immutability, for medical antiques, the bric-brac and mummies of ancestral chimney corners,—the preference is rather to do with that which is alive and promises life than with a carcass.

It is growing to be better recognized that the clearness with which the surgeon sees, the skill with which he works must come of accumulated experiences. We have a rapidly growing army of laboratory workers whose researches are making rich contributions to modern science, many of the men working with all the enthusiasm and energy of the old chemists. There is more grit and energy in the young of the profession than has ever characterized any previous period in the history of the profession. The old veterans are along with them with a youthful warmth of fellowship, and there is nerve and inspiration in their elbow touch. Wide series of researches have been called into life, directed by many along specific lines, and the more specialistic press upon our notice. These researches are evolving definite ideas from conflicting theories. So many are the kinds of work and kinds of workers that the laity are puzzled where to go and to whom with their special afflictions.

In this particular there is no very special harmony of opinion among physicians. Though a life is involved their better professional judgments are often overcrowded by personal prejudice, likes or dislikes. There is not enough of clean, clear, active working of professional conscience. There is something of appropriate illustration of this spirit in the hospital science drawn by the witty German, Henry Heine: "They remind me of a revolting quarrel, in a little hospital at Cracow, of

which I chanced to be a witness, and where it was horrible to hear how the patients mockingly reproached each other with their infirmities; how one who was wasted by consumption jeered at another who was bloated by dropsy; how one laughed at another's cancer in the nose, and this one again at his neighbor's lockjaw or squint, until at last the delirious fever-patient sprang out of bed and tore away the coverings from the wounded bodies of his companions, and nothing was to be seen but hideous misery."

Reckless ignorance, unreasoning jealousy, professional vanity, a narrow envious rivalry often goes on, insolently refusing counsel, until when the coverings are removed nothing is to be seen but hideous misery. The profession would not be impoverished by expelling all men with such low-governing motives, nor would humanity suffer.

In relation to surgery, the least experienced, the more ignorant are the ones who talk the most about the ethics of operative procedures, and even after they have failed in palliative treatment, exhausted their therapeutical resources they oppose resort to surgery. From this blindness, this narrowness, there will be an awakening. Fortunately this spirit grows beautifully less as the profession liberalizes under the influences of our advances. The notoriety of these characters renders their company of easy avoidance.

There is a certain justifiable antagonism between the honest, educated, conscientious general practitioner and the specialists of a certain class. There could not be, nor should there be, good feeling for that officious class who find fault with, and unsolicited, interfere with prescribed treatment. It is not by knowledge and skill such men sustain themselves, but by artifice, by undermining more worthy and better men. To them medicine and surgery are not learned, high-toned, dignified professions—but trades, marts, into which they can go with their wares and practice their damaging acts for the little, or much ready cash, they can command; their only credentials to recognition are their audacity and insolence.

The professional spirit of the period is not one of mimicy. It is not mortgaged to old ideas and methods. Innovations are welcomed; that only is accepted as tested truth which has withstood the severest processes of verification. We honor the man who confronts us with an honest difference of opinion; he may have much for us we need to know. I will greet him as my hero friend, if he, with his better light, will supplant my methods with his better ones, and I would have my patients send him greeting.

Both in medicine and surgery the line between enough and too much is becoming better understood. It is realized that the physician's resources are exhaustless—that they are co-extensive with the limitless field of medical science; that the highest honor of the profession is the cumulative culture, refinement and success of its individual members; that every growth and success of the individual physician is the honest advantage of all. We all must feel again and again the pain and mortification of imperfect work. We prefer to take the great workers, those working unremittingly to master the puzzling problems, as types or representatives of the best spirit of the profession.

There may be some barriers to the free use of some of our educational agencies, but they *can* and *will* be broken down. We will have more free, liberal and better teaching within the walls of our public hospitals, where ministers our public and private charities to the unfortunate victims of accident and disease; from their bedsides we *will have* the lessons that will advance our science and improve out art. We *will* batter at the doors until they *open*, or *down*, and let us in. The spirit that will gladly welcome will be substituted for the narrow and selfish one that bars us out. We are entitled to be present witnesses of those maladies with which it is our life mission to deal. There general practitioners can gain valuable lessons,—and it is in their ranks every successful specialist in the profession must have his beginning,—and there the honest, enthusiastic student of a specialism can the more thoroughly equip himself for his work.

Where the specialist in gynecology, or in any special line of surgery, attempts to give practical training it will be used against him by his professional rivals, who will try to secure patients by saying to them, "If you go to Dr. Blank he will have his students do the operation; he won't do it himself." This fact operates against practical training in private hospi-

tals. But no such excuse exists against such training in public or general hospitals. The thorough education of physicians, the health and happiness of multitudes of unfortunate human beings, demand that the lessons of the operating table and bedsides of these institutions should be the privilege of every physician and surgeon. That man does the most effective teaching who does it with his apron on. We cannot multiply to too great an extent the avenues through which we can obtain the highest education in our science, in the methods of the best surgical procedures, in the refinements of their technique. From every patient we attend there comes to us the urgent bidding, "give us the benefit of your best science, your most perfected methods for our healing."

I would press these facts home, for it is the voice of the profession that will bring about this important gain in our educational facilities. By the rights of that humanity it is our high duty to serve, I have a right to the benefit of what you know and you have a right to the lessons of my experiences, down to the simplest teachings of the cunning of my fingers.

A little aside from logical connection I would say that there is no self-mortification or shame in recognizing our individual professional limitations. When a member of my own family is sick, an early experience in general practice enables me to detect symptoms and locate the trouble, but I am prompt to call in a physician of known reputation for the treatment, an expert in the peculiar trouble, and the case is left as absolutely to him for treatment, as I insist upon in cases coming into my hands for surgical treatment. We can only stand, professionally, on the highest elevation when all the purely selfish elements are eliminated.

The inevitable risk in all cases, is that while the physician is being whirled around in a circle of doubts, symptoms are augmenting, the disease becoming more aggravated and the chances of relieving suffering and saving life growing less. Happily the profession is growing alive to these facts.

We are forced to keep in advance of the intelligence coming out from our free schools—I don't like the word common. Our clientele is demanding more and better work than was ever before demanded. Our specialisms are largely an outgrowth of this demand. In many instances the general practitioner tires of an extended and exacting practice, as he finds it wears upon his vitality. Necessity presses upon him to restrict its limits and he turns to some speciality in which his tastes and aptitudes promise success. Combining the training of his general experience with a careful and thorough training in the speciality of his selection, successful work is assured. He will hold high and honored place in his speciality—will make a record, and that not of a startling mortality. Not so with that noble possibility in embryo, the fresh graduate from our colleges, with his fashionable droop of the shoulders, bend of the elbows and knock of knees, and his one glove, who, immediately on receiving his diploma, essays to enter these fields with only his superficial theoretical knowledge, while he is scarcely prepared to do general work.

The need of the student is a hospital training, followed by dispensary practice, where he will become familiar with physical examinations and learn to recognize disease with varied forms. No one has a right to attempt the treatment of the diseases of women until he is educated to recognize and differentiate them.

Women would be better off if some of the so-called minor gynecological procedures had never been devised. Some operations and instruments in the hands of inexperienced and ill-trained hands are doing thrice more harm than good. It is alarming to note the number of serious major gynecological operations following closure or dilatation of cervix, also the inconsiderate use of the curette in the presence of advanced tubal and ovarian disease, or for the fancied existence of intra-uterine troubles, or as a therapeutic measure for a trouble lying beyond and unrecognized.

If it were possible to ascertain all the images called up to the inexperienced by the term abdominal surgery we would have a medley of conceptions as to such operations. The layman's views are very horrifying to him—to the poor woman, with whom we have to directly deal, they are not less so. We approach them, not with timidity, for that is not an element in the character of the surgeon, but with a very keen appreciation of the weighty responsibility involved, with a quick sense of the profes-

sional conscience, surgical judgment and skill needed to deal with those calamitous troubles to which women are subject. The woman, in the major cases, comes to us and uncovers "her hideous misery"—one perhaps concealed for years from a morbid sense of delicacy, or yet more likely and more frequently occurring where radical remedial treatment has been delayed through the tinkering and counsel of the attending physician. The specialist is very often her last resort. She goes to him in her desperation with her special trouble, when suffering has rendered her useless, life scarcely worth living, general health broken, weighed down by fears and many painful disappointments; with but one feeble hope clinging by delicate thread to precarious conditions. And then as she lies prostrate, disarmed, helpless, under our anæsthesia, there goes out from her a mute appeal to the highest motive that can govern in our surgery. It is, that by all the sanctities, there shall, unselfishly and devotedly, be rendered her the best service of trained judgments and skilled hands.

To be fit for this work the surgeon should clearly recognize the possible complex conditions lying concealed. His understanding of the organism of the parts with which he deals and their functions should be as nearly perfect as lies within human limitations, and this is possible only to the one who patiently investigates until he finds the truth. The great old scientist, Agassiz, could by a bone, detect a fish belonging to an extinct species; his thorough knowledge of the organic structure enabled him to know the parts.

In abdominal surgery, in fact in all surgery, there are important requirements and conditions auxiliary to judicious surgical treatment and success. The utmost care should be exercised in making all the patients' surroundings, in minutest detail, the very best. There should be cleanliness from the cellar floors to the escape pipe in the roof. There is no chemistry that will prevail against uncleanliness and slovenliness either in person or surroundings. Cleanliness, ventilation and dryness are the proper deoderizers of houses. The best precaution against all forms of dirt and dust collection is water, soap, brush, will and muscle. Their free and unremitting use, are the sure antiseptic against filth infections. Impure water is a sure conveyance of infectious poisons into the human body. All about there should be an atmosphere of purity, simplicity and cheerfulness. There is something very depressing, even to the well and healthy, in the gloom of surroundings. These sanitary and other precautions will not be carried out except under the most rigid surveillance of the surgeon himself. I presume I am not as well up in the Bible as my friends of Missouri and Kansas, but I thoroughly believe, indeed, know that the truth of the scriptural injunction, "Cleanliness is next to Godliness," is confirmed by the logic of every surgeon's experience. We insist upon the perfection of arrangements of sewerage, and scavenage, and a pure water supply for the prevention of filth diseases, while we often have offensive matter on or about our persons which water, soap and brush would remove. I would start with cleanliness, keep it up and end with it in my practice in obstetrics and in your practice. My practice in surgery and your practice, general or special, is worse than useless without it.

It is difficult to impress upon local sanitary authorities the terrible consequences of filth infections. It is sometimes only the noise of the dead carts and the activity of undertakers that awakes them to activity. It is only when filth diseases become mythically epidemic that they so far forget their despicable local politics as to pay attention to those sanitary matters which concern the welfare of the entire community in which they live and of which they are part. The continuous inflow into office receives more attention at their hands, than the continuous outflow of decaying refuse and infectious matters. The effect of such criminal neglect can not be represented in numbers, the diseased are not reckoned in the long roll of mortality.

The nurse should be the very impersonation and perfection of cleanliness, and not an animated lump of dirt and grease; she should be intelligent, quick and full of resource in emergencies; cheerful and amiable of disposition, not inclined to depression and moping. She should not be in love, except with her work. She should have great tact in dealing with patients, be quick to detect and adapt herself to peculiarities of dispo-

sition, even to those of the congenital shrew, combining with all great decision, coolness, nerve, kindness and gentleness. The expert, trustworthy and pains-taking nurse is invaluable to the surgeon; she relieves him of many anxieties and multiplies the chances of the patients recovery.

This rigid regime carried into our obstetrics would secure better general results than have heretofore been secured. The standard of proficiency of those attending through the critical period of child-bed cannot be made too high. We all know the damage and suffering caused by ignorance at this period. Ignorance nor any form of uncleaness should be tolerated within the sacred precincts of the child-bed chamber. These cases are often trusted to the care of women without the slightest education or preparation for this all important work, often women who are not capable of deciding in any given case whether the labor is natural or otherwise. Knowing the sequela, the terrible results of the ignorance of midwives, we take the high ground that mother and child should have the benefit of a trained nurse where such is possible, and of an experienced practitioner and obstetrician.

It, perhaps, is fortunate for us that we have no record of the terrible mortality of midwives—of the death and desolation their ignorance has carried into homes. In obstetrics our mortality should be about *nil*. I will refrain from discussing any of the muted questions in obstetrical practice. In the language of the grand old autocrat of the profession: "No man makes a quarrel with me over the counterpane that covers a mother with her new-born infant at her breast," and there may be something prophetic in his strong words that in a near future an enlightened public will have a "grand jury to bring in a bill against a physician who switches off a score of women, one after another along his private track, when he knows that there is a black gulf at the end of it, down which they are to plunge, while the great highway is clear."

There is one peculiar species of nurses I would not recommend to your favor. I would not recommend the selection, as nurse, of one who approaches the bedside and, gently stroking the patient's forehead, says, "My dear allow me to soothe your pathway to the grave. It would make me very happy to deliver any little last messages you may desire to leave behind for your friends. I hope you have arranged matters so as to feel reconciled to go." A nurse of this character exercises a rather melancholy influence. Too large a corps of nurses tends to confusion and is not favorable to good work. The number in attendance upon the operator should be limited to two, with perfect knowledge of his methods, and alert in anticipation of all his wants, and at no time should there be shadow of varying from his directions.

The most scrupulous care should be exercised in preparation of the patient for operation. One solution of the distressing mortality, following the work of some men, comes of careless preparation of the patient and neglected or bad nursing and after treatment.

Commonly the treatment begins in opium and stimulants and ends in opium and stimulants and a death certificate. Unfortunately some men are still at work using opium and condemning the use of the drainage tube. Comparing the crude imperfect methods of early operators we have a very satisfactory explanation of the causes of their startling mortality. Early in the history of ovariotomy the mortality ranged from twenty-four to seventy per cent.; now it varies from *nil*, in the hands of a few operators, to fifteen per cent. Careful and thorough preparation and qualification for this work, improvement and refinement in methods, accounts for this very marked reduction of mortality. Those with the highest percentage of mortality are of that class who began the study and practice of their surgery in the peritoneal cavity, with no other preliminary experience, probably, than that of having vaccinated a baby, and without that varied practical knowledge of general surgery essential to success in this special line.

To the inquiry, who should do abdominal work, there can be but one answer: The one who has served an apprenticeship and who knows where, when and how. The study of methods and technique by those ambitious to enter the field of gynecology, does not recieve that attention its importance demands. It is approaching close to the end of a century since the first ovariotomy was done; the methods and technique then were about the same as now; the procedure nearly as

perfect, and now it may be regarded as established. Then, as now, the pedicle was ligated and dropped. A number of American operators use the ligature and drop the pedicle. Dunlap, of Ohio, never used the clamps in a long series of operations.

The man who attempts this work should be quick, yet of deliberate decision. There should be no vibrating between conflicting opinions. He should possess skill of manipulation—a finger education. He should have a clear knowledge of planes of cleavage to be followed in enucleations. In these operations there should be no dancing about in uncertain efforts; a studied procedure will give a wealth of resource to fall back upon while dealing with troubles uncertain in character, relation and fixation to adjacent visara.

Surgery is not one of the dilettante sciences, nor one of rude medicinal art. It is best illustrated by masterly, civil engineering.

I will pass, in hurried and brief review, a few of our procedures. To do hysterectomy successfully, it is, first, of vital importance to learn how to make a pedicle. Second, how to treat it after it has been made. This once understood, the operator will have but little trouble with his patients and but few deaths. In a series of one hundred hysterectomies I lost six, three malignant and hopeless; two were pyæmic long before the operation, and one I lost by bad surgery. I will not here go into the history of treatment of the pedicle.

The removal of a simple cystoma is one of the simpliest of operations in surgery, a short incision, withdrawal of fluid, and sac; tying the pedicle and closure of incision by a few sutures, is a safe and simple procedure. But the removal of adherent or ruptured cystoma, or a suppurating cystoma with a twisted pedicle, a suppurating dermoid with universal adhesions, require some surgical judgement and skill. This complicated group requires painstaking enucleation for separation of all adhesions, careful examination and repair of all adherent and injuried viscera. In suppurating forms of pelvic and abdominal disorders, the adhesions and complications are all more marked and requires manipulation, careful and painstaking toilet.

In hysterectomy we are divided into two camps, some practicing the super-vaginal amputation, with the extra peritoneal fixation of the stump which gives the best results; others practice complete extirpation or amputation by the flap methods and dropping the stump; the mortality in both operations remains high, but there are some operators working with a low mortality by the extirpation method. The surgery of hard tumors is not so serious and difficult as heretofore imagined. It is true there is a great deal of surgery in the removal of a large fibroid, but if healthy and non-adherent it is a safe and easy operation. The removal of a healthy tumor from a healthy peritoneal cavity, the pedicle made small and fixed in the lower angle of the incision, is one of the safest of major operations. Some of the large, complicated tumors require incision and retraction of the capsule anteriorly.

Small tumors are just as dangerous as large ones in a majority of cases. In the first place, if they are left alone they often become big, and in the second place, the shape of the tumor often does more to determine its dangerousness than mere size. In fibroid tumors of the uterus fantastic features in shape are often present, and the irregularity of contour may cause a comparatively small tumor to encroach in this direction or that upon organs which, if it were symmetrical, would not be interfered with at all. Shape, then, is a great determining feature in the ease or difficulty with which a fibroid growth may be removed. If it is irregular its irregularlty will give less trouble when it is small than when its size is considerable. In addition to this, it is a feature that runs into time and extent of operation. It is rather surprising now to note the frequency with which fibroid tumors occur, and these of a dangerous type. It is surprising how many of these tumors are found among the better classes, where for a long time the woman will suffer in silence and finally only disclose her trouble after the growth is considerable. Here, too, the tumor itself often is not regarded, only the mischief it has caused. Œdema, pain, pressure upon the bladder or intestines or upon the diaphragm, may, alone or together, have rendered life miserable, and the poor sufferer is no longer able to hide her pain and discomfort. What I wish here to insist upon is that in this respect so far as causing complications is concerned—the small tumor is just as apt to figure as a determining factor as the large. If the tumor is a regular, symmetrical one the compli-

cations are apt to come on late; if it is small and nodular, irregularly filling up the pelvis and abdomen, the complications grow apace with its irregularity and the bias of its nodosities, and there is no saying when the symptoms may become suddenly urgent. Combined hard and soft tumors are by no means rare. They are apt to give rise to a good deal of difficulty in diagnosis. Fluctuation may not be present in the fluid portion, but only a peculiar resiliency, while the hard mass in connection with the elastic one may simulate to some extent a pregnancy. Indeed, here we come to a real condition, not a theory. In many cases where the Porro operation is indicated this is the very state of things found. We have a hard tumor or a number of them blocking up the pelvis or extending above the pelvic brim, thus interfering with the delivery of the child. If the woman has gone on to quickening the complication can be readily recognized; but if in the early months, or with a dead fetus, we are put to our wits' end to explain the situation, especially if the tumor has been of rapid growth, concomitant with pregnancy, and never before noticed. In such cases the minutest history must be gotten, and this, in connection with all subjective and objective signs, help us to a diagnosis.

One of the most common complications to be expected with fibroid growths is the dermoid cyst. This peculiar tumor is always an unpleasant complication of any condition alongside of which it may be found. It is uncertain in its nature, painful in character, apt to be complicated in its adhesions, its contents irritating, sometimes offensive; when this is the case the utmost caution must be used to avoid infection.

Tubal disease in the presence of fibroids is most common. This is to be taken into consideration when it is argued that a fibroid can be treated *per se* without resort to surgery. Now, in relation with all fibroids identical tubal disease does not occur. There may be simple inflammatory disease, or there may be hydro-salpinx, or there may be a true pus tube, or a combination of any two of these. What we are to remember—and this cannot be too strongly insisted upon—is that the danger of the existing complications may be paramount, in its way, to the danger of the fibroid itself. None of these tubal conditions, with all that this implies, are remediable save by direct interference, as the surgeon finds them. As to what the theorist has to say about them I do not much care.

All fibroid growths are to be watched carefully for malignancy. This is not to be lost sight of under any circumstances. If we attempt to lull ourselves into repose by imagining a tumor entirely benign, we shall often be deceived in the sequence.

Another complication of the fibroid is the irreducible ovarian cyst. Here we may infer that the two masses are one, and, if the error is not early corrected, we shall have the serious misfortune before us of at temping to include an ovarian cyst and a fibroid tumor in one neud. I have in mind a neophyte who, after seeing a fibroid removed by the extraperitoneal method, a day after followed the same technique with an ovarian cyst! Such is the demonstration of surgery to too many lookers-on.

Another altogether different condition, which may puzzle the acutest diagnostician, is a tumor of the kidney crowding itself down upon the uterus. Here the commonest manifestations of fibroid tumor of the uterus are present edema, emaciation, irregular bleeding from the weakened condition of the patient. The uterus cannot be separated from the tumor, and on combined palpation resists and falls with it. In such a condition it is easy to see how any lack of surgical resource is fatal to both patient and operator, and how different is the condition to be dealt with from what has been anticipated.

Bearing in mind the rapidity with which some forms of myomata develop, it is again evident that a thick-walled ectopic sac may simulate one of these tumors.

As I have already said, there has not been, and there is not yet, a consensus of opinion in reference to the best method of removing these growths. The objections to the clamp—the instrument that has given us the best results—are, I consider, puerile. The ideal method is that which gives the best results, aside from the inherent beauty of its conception and execution.

Of the many operations and modifications proposed for the removal of the fibroid uterus, there is need of here considering but three—to wit, the operation by the clamp or serre-neud; the operation for the removal of the entire uterus; and that of stitching the peritoneum across from side to side, leaving the crevix open

in order to allow the escape of pus and ligatures in a few days. Of this latter operation it is only fair to say that the results have been apparently good, but that it is good surgery, or more ideal than the use of the clamp, to do an operation with the expectation of pus to escape from the vagina, is not at all to my understanding.

As to drugs, the growth of tumors is not affected by their use, electricity aggravates them, complicates symptoms, multiplies the difficulties and augments the risks of surgical procedure.

From my experience I feel the importance of urging promptitude in all abdominal and pelvic troubles; of early ovariotomy; of educating the entire profession up to the importance of early recognition and early removal of cystoma; of the early removal of the appendages for fibroid growths; early removal of large and rapidly growing hard tumors, of tubal pregnancy ruptured or unruptured; the early removal of all suppurating forms of tubal and ovarian disease,—*actual, not fancied disease.*

It is important that every member of the general profession in active practice should be able to recognize any and all these troubles. When such becomes a fact of the profession at large an innumerable number of women will be saved untold, unguessed affliction and misery. We have a large and constantly enlarging *need* and the *field* of *work* is *immense*, and the *energy* and *industry* with which it is cultivated should be *correspondingly immense.*

The clinic makes accessible many primary truths and casts a rich light on many difficult problems.

As for myself, so supremely, so profoundly do I feel the great importance of our work, its far-reaching concern, that I would rather by continuous, unrelaxing effort crowd into a few year's that mastery which would crown my work with something prophetic, at least, of its possibilities; a crown into which I would have threaded the lesson that our skill, our refinements and our successes must come of intelligent, tireless application, unselfish devotion and generous co-operation; this, rather than a century of human existence tinkering with the afflictions of the mothers of our race. And in this I am happy in the consciousness that the hearts of many of the Fellows of my Profession beat time with mine.

SPECIALISM, AND THE INSANE.

By MARIE B. WERNER, M. D.
PHILADELPHIA.

The close relations which physical suffering bears to the mental emotions is shown daily, and recognized. Acute suffering produces a train of symptoms which pass off promptly after the cause is removed. Chronic suffering, on the other hand, will often undermine the nervous system to such an extent, that a previously equable temperament may give way to one of an irritable and excitable character.

The fact, so often met with in practice, of the continued nagging pain induced by chronic inflammation, and which produces in some a state of nervous excitability, frequently hard to combat, unless measures are taken to remove the source of irritation, will not be disputed. Such experiences have led to more careful investigations and researches in all the various special branches, and we have to-day the oculist aiding the neurologist in not only studying each case, but also aiding and directing cures, before deemed impossible. The surgeon's knife and trephine has achieved results, of which we can all be justly proud, in cases of epilepsy caused by trauma, or in idiocy induced by the general compression of the contents of a prematurely ossified skull. These special studies are the arms which gather in the suffering and needy to afford help and to make the body of the profession stronger. Another arm has been reached out in the last few years, but unfortunately has been misunderstood by many: Gynæcology, in its recent progress, has opened up many avenues for the cure of ills that were for a long time unrecognized in their entirety. Many have expressed themselves unfavorably, maintaining that extreme measures are resorted to more often than actually called for. Let us take an impartial view of this matter, confining ourselves only to those cases where *actual disease* can be demonstrated.

How often has the practitioner of long experience seen certain theories arise and die out after a time? Was that not because they had not sufficient foundation to live? "Truth remains, though the heavens fall." Who would think of allowing an abscess to burrow in loose structures, when an incision and well directed treatment will arrest the mischief and save the

patient from blood poisoning? Is there a surgeon who would hesitate to resort to the knife in any case, where, say gangrene or tuberculosis of any limb threatens life? Why should disease out of sight be treated less radically than that which can be seen? That each operator has in his early experience done some work, which he felt by knowledge gained later, he might have done better no one denies, but one cannot judge the other lest judgement fall back upon the judge. There are many hundreds who thank the surgeon's knife for the comfort they now experience, and the lives of usefulness they can led; and many feel the bitterness of the words "too late."

Some operators, who have successfully dealt with multiple and single abscesses in the pelvic structures, which had given rise to periodic attacks of pelvic peritonitis and in consequence to vicious adhesions which alone often give rise to the most painful symptoms, have extended their influence and knowledge in the direction of that class of unfortunates, who often cannot understand or make known their sufferings, viz., the insane. Their results have on the whole been encouraging, in so far that they have removed one source of irritation, always having in mind *to operate only in cases where disease can be demonstrated beyond a doubt.*

During the summer of 1891, in a conversation with Dr. Alice Bennett, of the Norristown Asylum, I found that she considered the presence of insanity an expression of destructive changes in the nerve cells, and from that standpoint a cure becomes impossible. For that reason she discouraged investigations on this point. In April, 1892, I received Dr. Bennett's permission to begin a series of studies at the Asylum in the early part of the following May, hoping, thereby, to aid in solving the important question Can the Gynæcologist aid the Alienist? And, for the benefit of those impartially interested, I will give a summary of thirty cases examined, and of two sections done on July 3rd, 1892:

Case I. Melancholia, following last labor, vagina examined; small mass in right pelvic space; prolapsus of uterus; lacerations of cervix and perineum.

Case II. Acute Melancholia. First attack supposed to have been induced by the establishment of puberty; second attack followed third labor; uterus fixed posteriorly; mass to the left; right ovary prolapsed.

Case III. Acute Mania. Attack sudden, in August, 1891; patient aged forty-seven; vagina examined; uterus drawn to the left; painful mass on right side; cyst of right labia: complains of pain down legs when walking.

Case IV. Melancholia. Second attack, vagina examined; uterus antiflexed; masses both sides.

Case V. Mania. Vagina examined; uterus retroverted and fixed; body large, cervix small; rectal examination reveals masses on both sides.

Case VI. Melancholia. Three months after birth of child. Uterus retroverted and fixed; external hæmorrhoids.

Case VII. Melancholia. Uterus enlarged, fixed to the left; mass on right side; cystic degeneration of cervix.

Case VIII. Mania. Multinodular Uterus; masses on the right side with tenderness; cystic degeneration of cervix, and bleeds to touch.

Case IX. Mania. Uterus enlarged; some impaired mobility; cervix cystic and eroded.

Case X. Mania. Last labor occurred six months before admission. Uterus enlarged, somewhat hard; moderately movable; cervix patullous; bleeds readily.

Case XI. Chronic Mania. Brain fever marked the onset of the attack; uterus retroverted, prolapsed and fixed; tenderness in both pelvic spaces.

Case XII. Mania. Mass in right pelvic space; perineum lacerated.

Case XIII. Melancholia. "Was not well after last child was born." Uterus prolapsed; laceration of cervix and perineum.

Case XIV. Mania. Second attack; uterus fixed, masses on each side; laceration of cervix and perineum; kraurosis of both vaginal orifice and vulva.

Case XV. Mania. Small undeveloped uterus; fundus posterior and to the left; moderately movable.

Case XVI. Mania. Last child July 20, 1891; placed in Friend's Asylum, August 8, 1891; uterus fixed anteriorly; tubes tortuous and enlarged; left ovary cystic; laceration of both cervix and

perineum; varicose veins at vulvar orifice.

Case XVII. Imbecility. Three children; last, four and a-half years before attack; uterus fixed posteriorly; masses on both sides; cervix patulous and lacerated; also perineum; hæmorrhoids.

Case XVIII. Mania. Last labor thirteen months before attack, which was gradual in onset; uterus and appendages normal; marked lateral tear of vaginal wall nearly to cervical junction, causing prolapsus.

Case XIX. Melancholia. Onset four months after last labor; uterus prolapsed and retroflexed; mass in left pelvic space; movable body in right pelvic space like the ovary.

Case XX. Chronic Mania. Uterus atrophied; laceration of cervix and perineum; some cicatricial bands in vagina.

Case XXI. Second attack. Atrophy of uterus; pelvic spaces free; some laceration of perineum.

Case XXII. Melancholia. Third attack. Antiflexed enlarged, but movable uterus.

Case XXIII. Second attack. Antiverted uterus drawn to left; mass to the right.

Case XXIV. Melancholia. Cause puerperal; uterus enlarged and prolapsed; mass on the left; lacerated perineum; external hemorrhoids.

Case XXV. Chronic mania. cause puerperal uterus fixed anteriorly, cervix large, body small and flabby. Tender masses in both lateral spaces; old fistulous tract to the right of the anus extending directly upward beyond the internal sphincter.

Case XXVI. Acute mania. Second attack. Antiflexed uterus; engorged cervix and vagina; mass on right side.

Case XXVIII. Chronic mania—pelvis of male type, vagina short, uterus undeveloped, fundus backward; cannot distinguish the appendages.

Case XXIX. Mania. Fourth attack. Vaginal examination, uterus fixed posteriorly, tender mass on left side. Section July 3rd, 1892, removed appendages; cystoma of left ovary; right ovary undergoing calcareous degeneration; both tubes undergoing tubercular degeneration; there were some adhesions from a recent peritonitis. Patient made a rapid and uninterrupted recovery; was discharged cured five weeks after the operation.

Case XXX. Acute dementia. Admitted 1888; vaginal examination; enlarged anteverted uterus; mass on right side distinct; complains of great tenderness in left side which feels boggy. Section, July 3rd, 1892; removed appendages; hydrosalpinx of both sides; left tube degenerated to a large cyst; dense adhesions to bowel uterus and posterior-cul-de-sac. On right side tube somewhat smaller but tortuous, fimbriæ of both obliterated. Used drainage thirty hours; patient made a good recovery, which I understand also includes marked mental improvement.

These cases have made me feel that there is a necessity for careful study of all cases, and especially those in which the puerperal period antedates an attack. If a remote irritation can lead to insanity or epilepsy, why cannot an abscess, tubercular disease or other pelvic inflammations, also enter the field as causative factors? The claim is not to cure by operation, but by removing the irritation and thus aiding nature in restoring, gradually, perhaps, its lost nerve force.

The presence of pain, a prominent symptom sometimes in the sane, is more often absent in the insane. This was markedly shown in a case, seen at the asylum, of probable osteo-sarcoma of the elbow of an insane patient. During the early stages of the disease, continued motion and increased excitement seemed to take the place of expressions of pain though she stoutly denied its presence. This became the more striking after the disease progressed, involving the greater portion of the arm, when she attempted to cool her arm in water and begged for a dose of magnesia.

It is impossible for the alienist to be a specialist in all branches of medicine; and it is a fact, that the insane are subject to all the diseases the sane are troubled with; hence the necessity for special work in special directions. This work however should be a conscientious painstaking study of each individual case, and the fame accruing should be based upon the products of such study and not upon the number of operations done, else the object is defeated at the beginning.

Sept. 28th, 1892.

Clinical Lecture.

THE ETIOLOGY, PATHOLOGY, AND TREATMENT OF FLAT FOOT.

By A. M. PHELPS, M. D.,

Professor of Orthopedic Surgery in the University of the City of New York and in the Post-Graduate Medical School, and Professor of Surgery in the University of Vermont.

Prof. Phelps first called attention to a cast, showing hallux valgus and an absence of the arch of the foot, while the outer aspect of the foot was rotated upwards, and there was apparently a dislocation of the scaphoid bone and the head of the astragalus.

Cases of flat foot are frequently congenital and in many children, up to the third or fourth year the arch of the foot will disappear when they are standing. This is owing to the bones of the foot not having become fully ossified at this time. Hereditary influence is also often traceable in these cases. Flat foot may result from paralysis of the flexor muscles of the foot —the tibialis posticus and the long flexor—by depriving the arch of the support given it by these muscles. Occupation is an important etiological factor, as those who are compelled to stand for many hours every day in one position often suffer from a relaxation of the structures holding up the arch of the foot. Those having a tendency to flat foot will often find the condition aggravated by a change of residence from the country to the city, owing to walking on hard pavements instead of on soft earth. If in addition to this, they develop much adipose tissue, flat foot is still more likely to occur. One's manner of walking is also of importance; every person should toe inward, for, when the foot is in this position the blow is received on the outside of the foot. Savage tribes walk in this manner, but civilization has given us the walk of weakness. These are the main points in the etiology.

Exhibiting a model of a typical flat foot, he explained how a true talipes valgus would result from a still further rotation of the foot. The first change which takes place is a lengthening of the soft parts, or girders of the arch of the foot; following this comes pressure between the scaphoid bone and the neck of the astragalus, and between the scaphoid bone and the internal cuneiform, which, when long continued, results in irritation and perhaps even in inflammation. Lastly there is spasm of the muscles supplying the joint with growth of new bone about the articulation, the result of pressure, precisely as is seen in lateral curvature of the spine upon the concave side of the curve.

This inflammation or irritation of the joint results in reflex spasm of the extensor muscles, chiefly of the peronei, which, if long continued, produces a true talipes valgus, together with a hallux valgus. In these cases there is always observed a lengthening of all of the soft parts in the sole of the foot.

Talipes valgus would not occur unless this pathological condition took place, which allows of dislocation downward of the scaphoid bone, the result of this unnatural lengthening of the soft parts.

Prof. Phelps exhibited drawings made from dissections to illustrate the condition of the parts. In the first one, which was taken from an extreme case of flat foot, the scaphoid bone was seen to be dislocated downward with the head of the astragalus, and a change had taken place in the articular surface of the cuboid bone. There was a growth of bone around the joint where the fibula had pressed into the os calcis. Another drawing showed the arch broken down, and the foot twisted upon itself, giving rise to a hallux valgus. He showed, by means of diagrams on the blackboard, the varying mechanical effects produced by the same force exerted upon arches of short and long curvature, and in this way explained not only the manner in which the deformity is produced, but the manner in which the remedy was to be applied.

Acting upon these mechanical principles, various appliances had been devised: Reynders puts a spring into the sole of the shoe; Dr. Royal Whitman has a plate molded over a cast of the foot, and then applied to the sole so as to hold up the arch; Thomas has suggested making the sole thicker on the inside than on the outside, thereby transmitting the weight through the cuboid bone, and so relieving the scaphoid from the pressure. Dr. Phelps had also had constructed after a German pattern, a shoe in which the patient walks upon a strap, the thickened sole on the inside of the foot everting the

foot in such a manner as to transmit the weight of the body through the cuboid, thus relieving the scaphoid bone.

These appliances are all useful in their proper place, but it is wrong to begin treatment with such instruments.

Commence the treatment by etherizing the patient, pressing up the arch of the foot, and then applying plaster-of-Paris. If the peronei tendons are much shortened, divide them, twist around the foot as much as possible, and super-arch it. This treatment should be continued for sometime, re-applying the dressings and correcting the position of the foot as often as may be necessary. When all that can reasonably be expected from this treatment has been accomplished, spring soles and similar appliances may be used.

When there is a hallux valgus, this should be at once corrected by operation, and this in itself, will sometimes cure the flat foot so far as the element of pain is concerned. Every case of flat foot is very likely to relapse, no matter what is the method of treatment adopted, unless carefully followed up and the foot kept well supported. If the foot can be placed in such a position that the weight of the body is transmitted through the cuboid bone, pressure on the inner side of the foot is relieved, and hence very little pressure will be required to hold up the arch of the foot; but if this be not done, so much pressure is brought to bear upon the springs that they cannot be tolerated. During the course of the treatment the patients should be taught to walk with the toes straight ahead, or, if possible, turned inward. They should also be instructed to strengthen the muscles about the foot by frequently raising themselves on their toes.

He does not share in the opinion of some authors that the tabialis anticus has anything to do with holding up the arch. If this muscle be paralyzed, the arch of the foot may or may not be relaxed.

Dr. Phelps then took up the question of operative treatment and presented a patient upon whom he had operated for flat foot. This young man had been treated for a number of years, but the condition had proved a most obstinate one. Almost all the usual methods had failed to give more than temporary relief.

The last operation, Bond's scarification, was performed six months ago. The patient is now able to walk considerable distances without discomfort, and can stand ten hours a day without pain. Objection has been made to the open operation for talipes varo-equinus, on the ground that the scar was likely to be sensitive; hence it is interesting to note that in this patient the scar tissue was quite extensive and yet he can walk upon it without any pain.

Dr. Willy Myer had presented to the Academy of Medicine some very good results obtained by Trendelenburg's method of supra-malleolar osteotomy. For those patients who are not particular about the looks so long as the foot is useful, this operation is likely to prove of service.

Communications.

THE SORE NIPPLES OF NURSING MOTHERS AND HOW TO TREAT THEM.*

By P. F. ELLIS, M. D.,
BELLS, TEXAS.

Leaving the elucidation of obtuse scientific questions to others, I have selected as a subject for this essay the plain and practical one of "The Sore Nipples of Nursing Women and How to Treat Them." The title of my paper deserves the thoughtful consideration of every medical man who has one of this class of sufferers under treatment, because certain relief follows prompt treatment, while delay brings indescribable suffering and permanent injury to the mammæ involved.

Finding so little in the literature of the day upon the subject, and that little found so erroneous and therefore misleading, long since I have adopted ideas of etiology and treatment of this affection which are at least original with me.

I find from experience that women who have pink-colored nipples are the chief sufferers; never having met with a case of fissured or raw nipples where those organs were dark-brown or blackish; neither have I met with a case in the Negro or Indian. Why this is so I will not undertake to say.

I deem it unnecessary to consume your

*Read before the North Texas Medical Association, Dec. 15, 1892.

time in giving the anatomy and physiological action of the milk-producing apparatus, but, that I may be the better understood further on, will say that the mammary gland is conglomerate, consists of numerous secreting follicles, grouped together in lobules, each lobule having a common excretory duct which joins those coming from adjacent parts of the gland. In this way by successive union they form the cylindrical lactiferous ducts. These ducts run a generally irregularly, straight, or curved course to immediately beneath the base of the nipple, where there is a very perceptible enlargement of the caliber of the tube (an ampulla) formed; at the outer end of the ampullæ quite a narrowing of the tube takes place, and at this narrowing many of the tubes are bent at a greater or less angle; from this angle a straight course is pursued to the extremity of the nipple where they emerge in fifteen to twenty openings for the final exit of the milk.

When the narrow point at the angle is insufficient to permit the outward flow of the glandular secretion, the ampullæ are distended, forming a kind of stricture that sometimes gives us the counter-sunk nipple.

The symptoms and signs of obstruction are: (1) the child sucks so hard as to cause the mother pain, while it frequently loosens its hold upon the nipple to fret and cry. The blood is drawn from the capillaries at the end of the nipple; (2) tender streaks extend back from the base of the nipple corresponding to the over-distended milk tube, and the lobules (or lobe rather) from which the obstructed canal leads is found to be hard and exceedingly tender to pressure; (3) we find the ineffectual sucking has denuded the end of the nipple of all or the greater part of the integument.

The over-distended lobe now takes on suppurative inflammation and nature undertakes to find an exit for the pent-up fluid by another route. The poor mother now suffers the horrors of the inquisition and frequently appeals to her medical attendant for relief in vain. The abscess forms and is lanced, or breaks, and relief speedily follows. The lobe involved is destroyed and the duct leading therefrom is obliterated. The child is taken from the breast and the nipple, or, what is left of it, heals.

The treatment to be of service must be instituted early, that is, before suppuration proceeds too far. The earlier commenced the more certain the cure. The plan is this: On attending a woman in her first confinement, inspect the nipples before you leave her, and if they are of that delicate pinkish cast, which indicates a thin, tender skin, ask that you be informed, if, about the fourth day when the milk should begin to flow, the child sucks very hard, and if there are tender cords or lumps in her breast. If so, prepare yourself with a small magnifying glass—one such as watchmakers use—and squeezing the nipple gently so that the 15 to 20 openings for the corresponding tubes can be plainly seen, into each of these orifices introduce a fine probe and carefully follow the canal to the ampulla. When the strictured one or ones have been passed, introduce a blunt probe of larger size and more fully dilate the so-called stricture and the case is cured at once.

The operation can be done in fifteen minutes' time. It is not necessary to use an anæsthetic, and one sitting is sufficient. There is no operation within my knowledge so easily performed, or that is so satisfactory to both physician and patient.

Should the nipple have become raw and suppuration far advanced, evacuate the abscess with the knife; turn a gentle stream of water as hot as can be borne upon the nipple; dry and let the infant nurse, and then apply the water as before, except that to each pint of the water used *after* the nursing, add one drachm of boric acid; and after using the last bath, moisten one side of a pad of absorbent cotton with a solution of boro-glyceride and apply to the sore nipple. Allow the infant to suck not oftener than once every four hours, and your patient will soon be well.

ABORTION; ITS TREATMENT.*

By I. E. WEBB, M. D.,
McKINNEY, TEXAS.

By abortion is meant the interruption of the process of gestation any time from the time of conception to the end of the fourth month. There is no condition to which a pregnant woman can be subjected

*Read before the North Texas Medical Society at Fort Worth, Texas, December 13, 1892.

that is more deleterious to her health in its immediate as well as remote effects. Abortion is a pathological process and should be dealt with as such. In studying its treatment we should first understand the condition with which we have to deal. Without going into a detailed description it will suffice to understand that the close attachment of the products of conception to the uterine wall at this stage of gestation renders it most difficult for the uterus to completely separate itself from said products because of the anatomical condition and the physiological relations.

During the earlier months of pregnancy the products of conception are more adherent to the uterine wall than at any other stage of gestation, hence, require more force for complete separation and expulsion at the time the uterus is in the most unpropitious condition for the effort. During this stage of pregnancy the increased size of the uterus is due to an hypertrophy of and increase in the cellular elements of its muscular fibres, hence, it is in a less favorable condition to contract than during the later months of pregnancy, when its increased size is due to a distention of its muscular fibres.

Nature never intended that the process of gestation should be interrupted, consequently when it is interrupted she is not so competent to carry on the process of involution as after labor at full term. The muscular fibres of the uterus during early pregnancy have not arrived at that stage of development at which the process of involution is easiest accomplished; consequently, in a case of abortion, nature is placed at a disadvantage in performing both the expulsion of the contents of the uterus and the process of involution afterwards, which is so essential to the maintenance of the woman's health. It is in assisting nature to properly perform these two functions that I wish to emphasize.

When a physician is called to a case of inevitable abortion—and it is only that class of cases that I wish to speak of in this article—his duty is two-fold: *First*, to empty the uterus of its contents as quickly as is compatible with safety to the woman; *second*, to institute after-treatment that will enable nature to accomplish perfect involution of the uterus.

In the treatment of abortion physicians are divided into two classes: *First*, those who adopt the so-called conservative treatment, which consists in using a vaginal tampon, and the internal administration of ergot to control hæmorrhage and excite uterine contractions and thereby the expulsion of its contents. *Second*, those who look upon the products of conception as a foreign body, and proceed to rid the uterus of it at once, usually by means of the curette.

Two immediate dangers connected with abortion are hæmorrhage and infection. The remote danger is imperfect involution and its results. In regard to the so-called conservative treatment, the vaginal tampon is a very unsafe method of controlling hæmorrhage, and has no place in the treatment of this stage of abortion, save to lesson the anxiety of sympathizing friends, and quiet the fears of the patient.

When a case of threatened abortion has arrived at that stage where we can safely use the tampon, that is, when it has become inevitable, the os uteri is sufficiently dilated to institute a more efficient treatment. The action of ergot in these cases is questionable, for it makes the uterus contract upon, without expelling, its contents, and, should we decide to institute a more radical treatment afterwards, we will find its administration has been a disadvantage because of the contracted os uteri which it produces.

The radical treatment, or, as I consider the most conservative method, consists in introducing a Sims' vaginal speculum, and, treating the products of conception as a foreign body which in reality it is, thoroughly curetting the cavity of the uterus, especially the placental site, removing every vestige of the placenta, and then washing out the cavity of the uterus with sterilized warm water, being careful that your irrigator allows a free return of the water, and that the force of the stream is weak. The fountain syringe being always used and the stream having only a fall of 18 inches.

During the third or fourth months of gestation we may safely wait until the uterus has expelled the fœtus and as much of the placenta as it can, providing there is no alarming hæmorrhage, before resorting to the use of the curette to thoroughly empty the uterine cavity. When the uterus is emptied of its contents thoroughly by means of the curette, hæmorrhage stops, the possibility of infection is *nil*, the uterus contracts upon itself, and is then in the best possible condition to

begin and carry out the process of involution. Ergot may succeed in emptying the uterus of the greater part of its contents, but in the majority of cases, because of its intimate attachment, there will remain some of the after-birth which is liable to decompose and infect the women, and which always prevents perfect involution, thereby producing that train of symptoms so characteristic of subinvolution, namely, prolapsus, more or less vesical tenesmus and frequent micturition, bearing down pains in the lower part of the bowels, pain in back, hips and head, more or less disturbance of the disgestive organs, menorrahagia or metorrhagia, corporeal endometritis with more or less fungosities; all the result of a failure on the part of physician to thoroughly clean out the cavity of the uterus at the time of abortion and institute the proper treatment afterwards.

When we have thoroughly emptied the cavity of the uterus, I don't think our services should stop here. Nature has yet to carry on the process of involution before our patient will be well again, and, as before stated, she is not as competent to perform her work after abortion as after labor at full term. The firmer the uterus contracts upon itself the more effectually it diminishes its blood supply, and hence the more rapid and perfect the involution. By way of internal medicines to accomplish this result I think nux vomica and ergot combined give better results than any remedies with which I am acquainted, and I believe when their daily administration is kept up for five or six weeks after abortion they always prove of advantage in restoring the uterus to its normal size. A woman should maintain the recumbent position and refrain from her household duties longer after abortion than after labor at full term. As a rule she thinks "I have only had an abortion and I can get up in a few days." It is the duty of her physician to teach her better. Furthermore, I think a woman should be examined five or six weeks after abortion, and if there is any subinvolution present the nux vomica and ergot should be continued and supplemented with the boroglyceride tampon until involution is complete. If such a course is carefully pursued with our cases of abortion, I believe fewer woman would to-day be in the hands of the gynæcologist.

Society Reports.

THE MEDICO-CHIRURGICAL SOCIETY, OF LOUISVILLE.

Stated Meeting, Nov. 25, 1892.

The President, Dr. F. S. Simpson, in the chair.

PRIMARY LATERAL SCLEROSIS.

Dr. J. B. Marvin: This patient (presenting case in person,) I saw for the first time in 1883, and incorporated his case in a report I made to the Kentucky State Medical Society, which met at Crab Orchard that year. At that time he was a student here in the Commercial College. Two years ago I saw him again at which time he entered the Baptist Theological Seminary here, where he is studying at the present time. I have not examined him since, and have only seen him once or twice in an attack that he called colic. The case is an extremely interesting one. It is not often that you can obtain as complete history and one that can be followed for several years. He has all the symptoms of lateral sclerosis; there is no history of injury, or specific cause, which would account for this transverse myelitis, and it looks more like a case of primary lateral sclerosis than I have ever before seen. Perhaps the early history of the case is best told in the patients own language.

"I noticed the first indications or symptoms of this trouble when I was fifteen years of age, at which time I was working on a farm down in Tennessee. We began our farm work early, some time in the month of January. About the middle of May I began to have a very tired feeling and would often have to sit down and rest; after sitting quietly for a half hour or so, I would get up and go on about my work but would not feel rested, especially about my limbs. Matters went on in this way until I was twenty years old. I would go to school for a few months in the year and work on the farm the balance of the time. About this time I experienced a little hesitancy in picking up my feet, but did not think anything of it, and went on working in that way until I was twenty-three; then began to use my cane a little, having greater difficulty in moving my limbs and feet, particularly in lifting my

toes from the ground. I have continued to go along in about that way until the present time. I am inclined to attribute the trouble to over-labor on the farm; if this be not the cause, then I do not know what it is. I never sustained an injury that I am aware of; have been thrown from a horse twice, but do not remember to have been injured, other than a thorough shaking up. The trouble does not seem to have progressed much, that is, since I was twenty-three years old; I can stand in one position without any tremor; it tires me more to walk than anything else. I say it has not progressed—I believe I have noticed that it hurts me more to go up the stairs, since I have been at the Theological Seminary, than it ever did before. This may be accounted for by the fact that I go up and down a great deal, and it is necessary for me to be on my feet several hours each day. I want to say this, that I am exceedingly anxious to be relieved of this trouble and would be very glad if some means could be devised to accomplish the desired end."

Dr. J. B. Marvin: When this man first came to me he had typical stiffness and rigidity of the muscles, with a tendency to contraction, and almost absolute inability to lift his toes from the ground. He had most marked tendon reflexes, as well as ankle-clonus and decided tremor. He has always had good digestion; there has been no disturbance of the bowels; no interference with the renal secretions; and he is mentally as well as he ever was. He has never had any eye or head symptoms. As far as medicine is concerned, I have told him there is nothing that would do him any good; the damage is done, this degenerative change has already taken place, and that he would have to make up his mind to be a cripple for life, so far as his legs are concerned. The trouble does not seem to affect him further than that. There is no atrophy of the muscles of the legs. The increased reflexes, rigidity and peculiar walk, make the diagnosis.

In regard to the localized lesion: the only question is, what was the cause, whether it was primary or secondary degeneration. I am inclined to the opinion that it is primary; certainly all the symptoms and history point in that direction. Authorities claim that there is no case on record in which the autopsy proved that this is a purely primary trouble, but that it is always secondary. Of course, it is very difficult to determine whether a man has not received an injury sufficient to cause some of the symptoms present in this case, and it may be that in a fall or in his work he has sustained a strain sufficient to produce irritation in the cord —secondary degeneration. There is absolutely no history of specific trouble. He claims never to have suffered a pain of any kind in his life. Another strange feature, if this is a secondary degeneration, is that in this length of time he has not developed any head or ocular symptoms. It is not often that we have an opportunity to watch a case of this character for nearly ten years. I do not think that there can be any doubts about the diagnosis. It seems to me to be a typical case of primary lateral sclerosis

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SPECIFIC LESION.

Case No. 2. This young man I saw for the first time this morning. You will observe he is a very strong, healthy looking individual, but in walking he uses his legs as though they were pegs, not stiff exactly, but lack flexibility. All the muscles of his legs are very hard; there is no patella reflex; legs are œdematous along the tibia and pit on pressure; there is no œdema above the knee or on the ankle; he has a very irritable heart, quick pulse, short-winded, pulsation at the base, hurts him to go up steps, but no organic disease of the heart, and no murmur at all; has suffered some slight pain in the chest. This young man, with several of his companions, a few weeks ago, started out to run one-eighth of a mile—a foot race for this distance, and, he says, his "wind" gave out before he had gone more than a few rods, and since that time he has been troubled more or less by this peculiar clumsiness or stiffness of his limbs. When I made the first examination I found him wearing a suspensory bandage. he also had a very large bubo on the left side. Before I examined him I had a suspicion that it was specific trouble, and do not now think there can be any doubt about it. It is one of those cases, which, if it goes on for a while without treatment. would be classed "locomotor ataxia," and some man who understood his business treating it properly, the case would be reported as cured of locomotor ataxia. It

has every resemblance to locomotor ataxia in the absence of the patella reflex, although this might occur in other troubles. I do not think it is necessary to look for any other cause than specific infection, and I believe specific treatment is clearly indicated.

DISCUSSION.

Dr. A. M. Cartledge: I would like to see this boy go without specific treatment for ten or fifteen days; I cannot help believing that there is a traumatic element in the case. I fail to locate the specific lesion in the phenomena observed. In the general symptoms I do not see anything indicating syphilis; the œdema and hypertrophy of the muscles might be accounted for by simple trauma. I believe that absolute rest with probably some local application to his limbs would be the most rational treatment.

Dr. A. M. Vance: I believe the last case is undoubtedly one of cord trouble. I do not think the effort he made had anything to do with it. The œdema could easily be accounted for by the rigidity of the muscles. In fact the œdema signifies nothing; it is not uncommon to see that much œdema in a perfectly healthy man, especially one who stands up a great deal. I believe that the great majority of the cord lesions simulating locomotor ataxia, are specific.

Dr. J. M. Ray: In regard to the eye symptoms in these cases—I have under observation for some time, three cases of one-sided midriasis that are peculiar. The first time I saw these three patients was about six years ago, soon after I came to Louisville. They all had one-sided midriasis and one-sided ciliary paralysis. I have watched all three of these cases, carefully observing all the symptoms. One of them at that time had absolutely complained of nothing; now he is a confirmed locomotor subject. When I first saw him he had no evidence of locomotor ataxia at all. Another one in the last eighteen months has been suffering from what he says is sciatica; has been having pains up and down one leg. For this his doctor has been using a strong galvanic current. The third one was in my office a few days ago, and I questioned him pretty closely, but he denied having any pain at all. However, he did state that after he had stood on his feet for a while, when he started to walk his feet felt like they were padded or cushioned. I believe this will develop into locomotor ataxia. All of these patients are between thirty and forty years of age; I saw them all about the same time, and they all absolutely deny any specific trouble.

Dr. J. B. Marvin: In my experience I have only met with two cases of locomotor ataxia in which there was a joint lesion. I believe that these cases may be very insiduous in their development, and may develop occular symptoms very early, like those mentioned by Dr. Ray. I have one case under observation now which I have been watching for about fifteen years. The first sympton that attracted my attention was the condition of his eye; contracted; permanently fixed pupil. He went on this way for a long time without developing other symptoms, until two years ago when he began to have symptoms interfering with his locomotion, that is, his equilibrium, pain in the legs, staggering walk, etc., etc. He has improved greatly under iodide of potassium. There was no history of syphilis in this case.

A CASE OF MALINGERING.

Dr. A. M. Vance: I would like to mention a case: Two years ago Dr. Mathews asked me to see a patient with him, a young woman in this city who claimed she had chronic constipation; that sometimes she would not have an evacuation of the bowels for six months. Her father and mother both corroborated this statement. She looked like a moderately well nourished woman, brown skin, good color. Dr. Mathews and myself put her under chloroform to see whether there was an accumulation of fecal matter in the bowels and examined her by palpatation, but could not find anything. We then injected into the bowels a large quantity of water, under chloroform, after which there was only an ordinary evacuation. I am absolutely sure that the bowels contained no more fecal matter than in a person who has an ordinary evacuation every day. I believe that this woman was deceiving her parents, and that they were perfectly sincere in their belief that she only had an action of the bowels once in six months. I believe that she had an evacuation every day. While under chloroform we thought she was dead because of a cataleptic spasm which came on.

DISCUSSION.

Dr. A. M. Cartledge: I treated this patient in a violent attack of facial erysipelas; she made a good recovery, and there were no symptoms indicating a disturbance or irregularity of the secretions.

FURTHER REPORT OF CARE OF SARCOMA OF UTERUS.

Dr. C. Skinner: I would like to hear a continued report of the case operated upon by Dr. Vance recently at the Infirmary for supposed sarcoma of the uterus.

Dr. A. M. Vance: The patient in question has made an excellent recovery. It has since developed that the section shown upon slide of the microscope, which was supposed to have been secured from the horn of the uterus, was taken from the fallopean tube, or, in any event, from some portion of the specimen remote from the horn of the uterus. If it was sarcoma it was evidently all removed, as there has been no recurrence. The woman has menstruated twice since without pain, which had not been the case for twelve years prior to the operation.

MIGRATION OF A LIGATURE.

Dr. C. Skinner: I want to report a case showing how a ligature will migrate. In June last I operated upon a woman removing a tumor about the size of a large cocoanut, took out the uterus, tied off the ovary on the other side, putting on a double ligature—Tait ligature—treating the pedicle extra-peritoneal. The wound healed up very nicely and the ligature to all appearances was absorbed. The woman has been perfectly well ever since. About two weeks ago she brought to me a thread that had come out of this old scar. It had opened slightly afresh, discharging this portion of the ligature. I know it was the pedicle ligature from the way it was tied. The wound again healed and there has been no further trouble.

AMPUTATED HIP—CONTINUED REPORT.

Dr. A. M. Vance: Some time ago I reported the case of a boy whose leg was amputated at the hip. I would like to make a continued report of the case, as it is a very remarkable one. This boy's history was about as follows: He had hip joint disease coming on when he was about ten years old—there was rapid formation of pus with abscess in Scarpa's space. At the time of opening, upon the introduction of the finger, it was found that the tissues between the femoral artery and the abscess were very thin, and we did not put in a drainage tube fearing that sloughing would take place. About a month after opening the abscess and after running a very septic course, early one morning the femoral artery ruptured spontaneously. The leg was amputated at the hip forty-eight hours afterward as the foot was gangrenous. Operation was done very quickly, the patient being on the table but a few minutes, but his condition was such that his recovery was doubtful. About two months after this he had an attack of double pneumonia; he was still in a very hectic condition, and very little recuperated from the state of depression he had already arrived at and looked as if he was going to die shortly, but the crisis came after about three days. He recovered from the pneumonia, that is the right lung cleared up very well, but the left side of the chest remained dull, the heart beating over to the right side, and we soon found that he had an immense accumulation of fluid in the left chest which was tapped three times. Three and one-half pints of fluid removed the first time; two pints the second and two pints the third time, a pint of which was pus. By this time he was getting pretty shaky again, and I determined to give him another chance, so excised the eighth rib about a week after the last tapping. The cavity was thoroughly washed out with hot water and two large drainage tubes inserted. In washing out the chest, it was done very thoroughly, throwing the water in through one tube which came out of the other, and with each inspiration and expiration it would work like a force pump. The tubes were allowed to remain in for about ten days, when they were removed and a pledget of gauze inserted into the cavity; this was also removed in a few days and the wound healed perfectly.

I think it is quite a remarkable case, the patient going through two grave operations and double pneumonia inside of three months.

DISCUSSION.

Dr. A. M. Cartledge: I have recently had several cases of empyema, which have been operated upon by resection of a por-

tion of rib. One case was particularly interesting in that the matter discharged through a sinus in close proximity to the pericardial sac. The patient has done very nicely and the tube will be removed to-morrow or next day. I would like to ask Dr. Vance what method was employed in amputation at the hip joint to control the bleeding.

Dr. A. M. Vance: The artery was already tied owing to spontaneous rupture. I read a little paper the other day at the Southern Surgical and Gynæcological Society making a plea for more rapid surgical work. I will state that in the amputation at the hip which I have just reported, the operation was done and the boy back in bed in less than nine minutes.

I believe that two or three minutes more would have caused his death. Resection of the rib was done in seven minutes; of course this is a much easier operation than amputation at the hip.

Dr. J. B. Marvin: Bearing upon Dr. Vance's case: The question has often arisen whether there would be any depression after resection of a portion of rib in cases of pleuritic trouble. I have recently seen several of these cases, in all of which there seemed to be perfect restoration of the lung and no depression. From the external appearance you would never know that a piece of rib had been removed, and the pleuritic effusion evacuated, except for the existence of the old scars.

Dr. A. M. Cartledge: I would like to ask Dr. Marvin if he does not believe all of these cases of pleuritic effusion, whether purulent or otherwise, are microbic in origin?

Dr. J. B. Marvin: Yes.

Dr. A. M. Vance: In all the cases I have had there has been perfect restoration of the lung.

Dr. J. E. Hays: Is it necessary always to remove a portion of rib to bring about drainage in these cases?

Dr. A. M. Cartledge: I believe that in seventy-five per cent of the cases it will be found necessary to resect part of the rib.

Dr. J. E. Hays: I remember a case I had while I was *interne* at the city hospital; an incision was made in the seventh intercostal space, a drainage tube inserted and the cavity thoroughly washed out with carbolized water. The patient made an excellent recovery. It never became necessary to excise the rib. Before the operation the patient was almost unconscious. Chloroform was not administered.

Correspondence.

MEDICAL LEGISLATION AND MEDICAL EDUCATION.

S. S. TOWLER, M. D.
PENNSYLVANIA.

To those who believe in the dignity of the profession and strive to maintain it, the efforts now being made "to advance all along the line" in medical education, are most comforting. The candid admission, that Medical Education was not what it ought to be, and that ignorant and incompetent "graduates" were each and every year being turned out by the hundreds, was the first step in the right direction. I say the first step, because it is impossible to reform either the individual, class, or community, until they are first willing to admit that the wrong exists and realize it. The next step taken was equally important and encouraging, viz., the recognition of the fact that it was one thing to object and find fault, and an entirely different thing to do better.

We have medical colleges east and west, north and south, that we are justly proud of, as we also are of the fact that the leaders in the American profession are the peers of any in the world. Three and four year terms, "Clinics," and "Polyclinics," practical teaching and bedside knowledge, with the more rigid requirements for matriculation are great steps forward. How the "old man" sighs, as he thinks of what he might have been with these advantages in his early days. Every man who loves his profession, honors the professors and trustees, who have stepped to the front, and propose "to fight it out on this line." What a pity it is that these efforts can be and maybe; yes, will be, to a large extent, rendered unfruitful for years to come, owing to the cupidity of other professors and trustees, and the indifference of the public. The one class, those colleges that will not march forward, only see in the more stringent requirements of the better colleges, increased prosperity for themselves. They know that the same class of students who fill their seats now will continue to come, and the more readily on account of the longer terms and more strict requirements of the other colleges. The man who simply wants "to get through" will still

go there and he knows that he will get through. "Ten months and I'll be a doctor," is a tremendous temptation for the young fellow who despises the plow, work shop and the mill. "Ten months," why he can't "graduate" on either the farm, or in the work shop, or mill in that time, and he knows it. A young fellow asked me not long ago, "Doctor how long does a young man have to study before the Presbyterians will ordain him?" "About seven years," I replied. After a long silence he said, "I guess I'll be a doctor, there is ———, only two years ago he was driving a meat wagon,and look at him now. He is "Mike with Pete's boots on." Perhaps there was something in the meat business that specially fitted him for the profesh, eh!" It was a very sickly smile that came on my face at the joke. "Ten months is bad enough in itself, but when even the ten months are put in a desultory manner, as they often are, what kind of a graduate can we expect?" It is always with a feeling of pain and sometimes reluctance that I write or talk on this subject, for no one can know more about the hardships of the poor, young beginner than I did. I sympathize deeply with the young fellow that leaves college with almost his last dollar gone and whose only hope for another is in an early and timely patient.

After twenty-five years' practice I can look back and see how much better it would have been for me, had entrance into the profession been more guarded though it would have been very hard on me at the time. I could *not see it then*—I *know it now*—and so does every candid practitioner of years' experience.

Yet in those days I think preceptors took more interest in students than they do now. I know I owed to a preceptor all the practical knowledge I had when I began practice. He took me with him to to see his cases and would patiently explain the situation. He would stop the buggy in the woods where he gave me lessons in medical botany. It was very pleasant and very practical, equally practical, but not so pleasant was sitting on the back office floor, with a big iron mortar between my knees, pounding green roots and powdering assafœtida. Those were not the days of "elegant pharmacy." I have dropped into this personality because in the correspondence occasioned by the publications in this journal of my paper on "Medical Legislation," has appeared in effect this, "your position and arguments are all right but its hard on the young fellows." I know all about that side of the question and my present conclusion is simply one of conviction after years of practice. I believe from my own experience, as well as from the logic of the situation, that it is very much better for the student, hard as it may now appear to him, to put in four years instead of two, and infinitely better for those amongst whom he will practice. Besides this, practice is not to-day what it was then. He is a bright student and a worthy graduate, who at the end of three, yes, four years, is fully up with the times in these days. It is impossible, with all the meaning that the word implies, for a young fellow to-day to leave a common school and with the ordinary common school education to enter a medical college of the advanced grade, and at the end of four years, come out, up with, and abreast of the times. Impossible, because the foundation is not there to build on and he will have no time to spare undermining the superstructure in order to rebuild the foundation. It will be too late to begin taking out the wooden posts to put in a stone wall. Advanced medical knowledge of this day is simply a stupendous study. None know it better than those of by-gone school days, who are trying to keep in these latter days, at least within hailing distance of the new discoveries and ideas. All this, however, is of no consequence to a class who long to pose as "professors," and the class who want to pose as "doctors." With them two terms of five months each will still be long enough.

Then that other class, the indif, ferent public. Indifferent, because they do not realize the situation; indifferent, because so many in the profession are indifferent; indifferent, because to them "a doctor" is "a doctor," regardless of his qualifications. This public indifferance is more than astonishing when one thinks of what it involves. Then there is the consequent factor of this indifference, ignorance, as to the needed qualifications. Yet there is no subject of which the average citizen, male and female, assume to know so much as that of medicine. Consciously or unconsciously, they assume to know, as witness the dismissal of worthy

medical attendants and employment of the quack without reason or even inquiry. It is perfectly safe to say that not only us country physicians have our patience tried with this sort of thing, but that not a prominent city physician but has had patients leave him and go to an ignorant pretender. It is not only the ignorant public that do this, but judges, lawyers, merchants, and sorry I am to say, many clergymen.

This reminds me of a funny incident. Two years ago I was sitting in the almost empty Senate chamber at Harrisburgh conversing with that prince of good doctors, Prof. John B. Roberts. We were going over the "Examiner's Bill" together, and Dr. Roberts was in deep earnest. It is only justice to him to say that he instilled a good deal of his enthusiasm into me. As the good doctor was thus laying it earnestly down a prominent member of the "House" passed by. On my return to the "House" side of the capitol, this gentleman who was always jolly, said to me, "Who is the distinguished looking friend over in the Senate?" I replied, "Dr. John B. Roberts and he is very much in earnest over the Examiner's Bill." "Ah!" said my friend," probably some quack has coppered one of his best patients." I laughingly assured the honerable gentleman "that that was *not* one of the arguments that the doctor had advanced."

Now what is to be done with these three classes. The professors "of Cupidity," the anxious "to get through" student, and the indifferent public. Can the professions or the public afford to wait until the people are educated up to the *discrimination* process? Certainly not. When the educated layman has reached that point, we must still remember in the interests of a common humanity, that "the poor ye always have with you." The poor, the ignorant poor, whose father, mother, son, daughter, baby, is just as dear, and whose life is just as precious to them as those of the learned, or "better class" are to them. It were a shame on our manhood to leave these victims to the pretender.

The remedy is *Medical Legislation.* That, and that alone, provides the remedy and as it is for public protection, it is the natural and rational remedy. While the State Medical Society is bending its efforts to secure this public protection, those colleges that have adopted a three and four year course, can not afford to stand idly by. To make the advance effective, they must like good commanders, protect the rear. It will not do to simply pass a faculty resolution of approval. "Cordial Sympathy" effects nothing. The other side won't pause, passing and monkeying with resolutions. They will be and are *at work.* The faculty of every three course college should at once get in line, and communication with Dr. McCormick, chairman, and Dr. Roberts, secretary of the State Committee.

Gentlemen of the Pennsylvania Regular Faculties,—Country Doctors can only contribute their mites, you can "pour out" of the welath of your brains and influence. Besides your personal influence you have behind you, *in your Alumi*, a powerful army. Call these to the front to battle for the honor of their Alma Mater and the advancement of the profession, and do it now.

The *Pittsburgh Medical Review*, of December, says: "The merely passive approval of the friends of the bill is more to be feared than the activity of its enemies." That is the situation exactly. "Whoop her up for all your worth" is neither elegant or professional, but it expresses what needs to be done very fully. The profession can not afford to pass, or attempt rather, to have bills passed by *Legislative tricks.* The bill that will be put before the Legislature is worthy enough to pass on its merits without change or admendment. The State can have nothing to do with "Sect" in medicine, any more than in Theology. That position once taken and the Thomsonian, the Hydropathist, the Vitapathic, and every other "pathic," and "ism" would have a right to state recognition. The proper thing to do is for the profession, as a whole, to stand by the State Society's bill, as *it is*, and thus work for public protection and honor ourselves.

Removal of the diseased part of the ovary, when not more than half of it is involved, is now advocated and practiced by advanced gynecologists. The remaining part of the ovary is neatly stitched together with fine sutures and good results are reported.—*Ex.*

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THE MEDICAL AND SURGICAL REPORTER.

SATURDAY, DECEMBER, 31ST, 1892.

MEDICAL LEGISLATION.

Of late THE REPORTER has devoted considerable space to Medical Legislation and Medical Education. No apology need be offered for this in view of the great and widespread interest that has been aroused concerning these questions.

Of direct interest to the profession in Pennsylvania, and incidentally to all medical men, is the renewed attempt to obtain for this Commonwealth such legislative action as will compel those seeking to practice within its limits to furnish proof of at least ordinary capability.

An unsuccessful effort was made to obtain such enaction of the last legislature. Various explanations of its failure have been offered, *class legislation* being the general rallying cry of those opposing the bill presented. In reality the probable cause of failure was a lack of combined effort on the part of the great majority of the profession interested, while there was no such lack on the part of the opponents.

The failure of this last effort may prove eventually most fortunate for the general cause of higher medical requirements. Certainly it has tended to arouse the profession, to crystallize its opinion and to unite its effort, to secure the desired end.

Whatever objection might be raised to the bill in its present form, it certainly cannot be said to militate against any individuals or interests, theories or practices which it is not directly and confessedly intended to abolish.

Our friends who believe in peculiar or specific systems of medicine and practice, accordingly, can no longer cry *unfairness* or *persecution,* for the bill designedly omits any test that would descriminate between conflicting theories of practice.

Indeed, the most influential and liberal of the so-called sectarian organs deliberately deprives any disposed to cavil of all hope of sympathy or support from the intelligent mass of men for whom it speaks. We take pleasure in presenting the following, which will appear as an editorial in the January number of the *New York Medical Times*:

PROPOSED STATE BOARD OF MEDICAL EXAMINERS IN PENNSYLVANIA.—STATE RECIPROCITY.

Another attempt will be made this winter to establish a State Board of Medical Examiners in Pennsylvania, and we sincerely trust that it may be successful.

The copy of the bill before us provides, among other things, that the Governor shall appoint nine persons, graduates of some legally chartered college having the power to confer medical degrees, with ten years active practice, no two of whom

shall be resident of the same county and none of whom shall be a member of the faculty or staff or any medical school or university.

"SECTION 6. Provides that the said board shall examine all applicants for license to practice medicine or surgery in this Commonwealth who are properly qualified according to the provisions of section seven of this act, and no one shall be excluded or rejected on account of adherence to any special system or school of practice. It shall hold two stated meetings in each year, one at Pittsburgh and one at Philadelphia respectively, and may hold special meetings at such times and places as it may deem proper. All examinations, when practicable, shall be conducted in writing, and all examination papers, together with the reports and action of the examiners thereon, shall be preserved among the records of the said board for a period of five years, during which time they shall remain open for inspection at the office of the said board.

"SECTION 7. Any person on paying ten dollars to the secretary of said board, and on presenting satisfactory proof of being over twenty-one years of age, of good moral character, and of having received a sufficient preliminary education as defined by said board, and diploma from some legally incorporated medical college or university having authority to confer degrees in medicine, shall be entitled to examination by the said board, and in case of failure, at any examination shall have the privilege of subsequent examinations without the payment of an additional fee. Each applicant who shall have passed a satisfactory examination shall receive from the said board under seal a license to practice medicine and surgery in the Commonwealth of Pennsylvania, and the said board may at its discretion grant licenses without examination to persons holding licenses from similarly constituted boards of examiners or boards of health in other States.

"The applicants shall be examined in anatomy, physiology, chemistry, pathology, hygiene, toxicology, differential diagnosis, surgery, and obstetrics; and each applicant, upon receiving from the secretary of the board an order for examination, shall draw by lot a confidential number, which he or she shall place upon his or her examination paper, so that when said papers are passed upon by the examiners the latter shall not know by what applicant said papers have been prepared, and upon each day of examination all candidates shall be given the same set of questions."

It will be observed that the only reference to drugs is in respect to their *toxic* effect, and thus all theory as to their *modus operandi* and the possibility of danger of prejudice on the part of examiners is avoided.

We do not see what more could be asked by any school of medicine than this, in the way of protection of its rights.

There are good honest men on both sides of this controversy, men to be trusted, but they have no confidence in each other. Each party feels that the other is trying to gain improper advantage, and how to get over this complication is the question. If the leaders on both sides could know each other better, it would certainly tend to promote confidence and harmony. If the homœpathists could be satisfied that their scheme of therapeutics was not in danger, they would be less suspicious.

The dominant school would be satisfied, no doubt, with the wiping out of all sectarian designations.

The records show 8,248 physicians in the State. Of these, 6,240 are denominated "regulars" for the sake of comparison; the secretarians number 1,075; those practicing without diplomas, 933. The homœpathists claim 691, and the eclectics, 293.

It must be evident to any one that a board consisting of three members from

each school, would not be justified by the above ratio.

It is well known what the result would be were there three distinct boards, and least qualified students would get through the weaker board as was the case in this country some years ago.

It is the wish, so far as we know, of all medical men in good standing, who have the best interests of the public welfare uppermost, that each State shall have a Board of Medical Examiners before whom all candidates shall be examined, and the method to bring about this result should be made as simple as the circumstances will allow, and each school should be anxious that no injustice is done to any.

NECESSITY OF STATE RECIPROCITY.

The next thing to do is to harmonize the working of these different boards in the various States, upon reciprocal grounds.

The reciprocity should be arranged between all States where the requirements of the law respecting examinations are *similar*.

It is an inconvenience and an injustice, to ask a qualified practitioner in one State to qualify in another, where he happens to be sojourning, before he can prescribe for a patient. The proper thing would be to have a National Board composed of delegates from the several States, where the different interests would be harmonized. It would subserve the end in view if the license to practice in a State of this Confederation, would be registered in each of the other States with whom the reciprocity exists.

Let us take, for instance, the States of New York and New Jersey, where it is almost a necessity for the practitioners of one State to practice more or less in the other, for various reasons.

As the laws are at present in these two States, the physician who prescribes for a patient out of his own State is liable to arrest in the other State for so doing, and to fine and imprisonment.

In the case of New Jersey, the law has resulted in keeping people away from it in summer, because their own physicians in New York would not take the risks of coming to them in case of illness.

Both of these States now have Examining Boards with requirements nearly identical, so that license to practice in one may be made to cover both, if the authorities agree to it, and this illustration shows how the principle may be made to apply to all States in the Union where similar conditions exist.

A bill will be presented to the next session of the Legislature in this State, with the hope that these unnecessary annoyances to the profession may be mitigated by suitable reciprocal provisions.

It is hoped that every practitioner in the State will see that it is for his interest to promote this movement, and that he will explain the subject to his representatives in the Legislature, that they may be prepared to vote intelligently whenever the bill shall come to be acted upon.

Our friends in New Jersey should make a similar move at the approaching session of the Legislature in that State, then, with two States working together on the reciprocal plan, it will not be difficult to unite others as fast as they adopt the plan of State Examination.

Never poultice the eye unless you want it to rot out. In case of sty or chalazion, and the globe of the eye is not involved, the lids may be poulticed over the swelling. In the beginning of those inflammations, hot water, applied every two or three hours and from five to ten minutes at a sitting, will often abort suppuration.

Incontinence of urine is relieved by belladonna when the following conditions are present, viz.: relaxation of the sphincter vesicæ or irritability of the mucous membrane of the bladder. From five to fifteen drops of the tincture or from three to ten drops of the fluid extract should be given at bed-hour. Children require large doses. —*Ex.*

Translations.*

By MARIE B. WERNER, M. D.

Fatal hemorrhage during the 9th month of pregnancy owing to the premature separation of a normally inserted placenta. M. Maygrier (*Bull et Mimoires de la Soc. Obstet. et Gynec. de Paris, 8, '92*). Patient had previously given birth to three children; last period Sept., 1891, normal pregnancy. On June 6th while the patient was seated on a bidet giving herself an injection, she was found by her nurse in an unconscious condition and deathly pale. She was at once placed in bed when it was found that a hemorrhage from the vagina caused the weakness. Twitchings of the face and extremities took place; the vagina tampooned and an abdominal compress applied. In spite of subcutaneous injections of stimulants, etc., the patient never regained consciousness and death occurred one hour after the hemorrhage set in. The child being dead Cæsarean section was not performed.

Post-mortem examination disclosed as cause of the hemorrhage a separation of the placenta of about the size of an ordinary saucer; all other organs were in good condition. Rare as this may be, it is a complication which must always be born in mind in cases of sudden death in pregnancy.

Pregnancy in a double uterus. E. Rossa (*Wien Klin. Wochen.*, 35, 1892). The patient during her 7th month of pregnancy was taken in labor, the midwife unable to find the os, sent for a physician who found the cervix high up, the uterus normally enlarged and to one side of it, in the abdomen, a tumor could be felt which contained the fœtus. The doctor suspected a tubal pregnancy with threatened rupture and sent the patient to the hospital. An examination showed the uterus to be between seven and eight months, vertex presenting. Vaginal examination reveals a rounded tumor, which is felt more to the right of the pelvis; to the left and posterior, the finger reaches up between the tumor and vagina wall, to a normal but hard cervix. On the left side of the presenting tumor the finger feels a small opening, one cm. in diameter, through which the membranes can be felt. This opening enlarges itself with the uterine contractions. Rupture of the membranes is followed by birth, after two decided pains. Delivery of the placenta was slow, and accomplished by manual compression. A subsequent examination showed a relaxed fold in the posterior wall, which proved to be the partition, between the two vagina.

The puerperium was normal, on the third dry there was a discharge of a gray reddish membrane which proved to be the decidua—of the left uterus. This was without doubt a case of double uterus and vaginæ. Until now there have been nine cases of this kind reported, three have been pregnant, this making the fourth, and the tenth in all.

Post-partum examination revealed both uteri to be entirely separate. The fundus of each being separated from each other six to eight cm. The formation of the body is spindle-shaped, the adnexa on both sides are normal; the cervices are also entirely separate. Both uteri are normally developed and normal in their functions. The first pregnancy occurred in the left uterus as shown by the cervix and was normal throughout. The second pregnancy occurred in the right uterus. The history of menstruation was normal at intervals of every four weeks. (In a case reported by Kubasson's there were intervals of fourteen days between the menstrual epochs). The vaginae are double, but the right side ended in a blind pouch behind the right labium minor. The partition wall must have been perforated before puberty, otherwise the normal functions of the uterus of the right side would have produced tarmatokolpus. The remnants of this septum may in any future pregnancy become an obstacle during labor, as it was, in a measure, in this present one by arresting the birth for a time. C. Braun has advised entire resection of such a septum. This was, however, not necessary in this case since the existing opening in the septum was easily enlarged by the examining finger.

Death in a child of ten weeks following an incomplete attempt at vomiting reported by Prof. Dr. Demme, of Bern, (*Wien. Med. bl.*, 12, '92). The child was fed on cow's milk and frequently vomited large masses of coagulated milk which had

*Translated for Medical and Surgical Reporter.

a sour odor. A mixture of Sod. Bicarb. 2:100 Ag. Dest. was ordered, a teaspoonful to each portion of milk. This produced the desired results, the vomiting ceased completely, whereupon the mother discontinued the medicine. One morning, however, she found the child dead. She had placed it into bed the night before apparently well after having fed it liberally on milk. The lips of the child were tightly clinched, of a dark bluish-red hue, cheeks and nails were bluish. An autopsie revealed the entire æsophagus up to its pharyngeal opening filled with a solid cheesy mass. This was also found pressing tightly against the epiglottis almost closing it hermetically. The pericardium and pleura were covered with numerous punctated hemorrhagic spots. All other organs were normal.

Without doubt the child strangulated in its efforts at vomiting. This to the author's mind, explains the cause of some of the sudden deaths without apparent reason, which so frequently appear in literature, and therefore thinks it wise to caution mothers to watch their children sometime after having fed them; and if efforts are made at vomiting to take it up and lay its breast over her arm and gently beat its back.

Phenolsalyl is a mixture of Acid Carbol. 9 parts, Acid Salicyl. 1 part, Acid Lactic 2 parts, Menthol 0, 1 part, dissolved by heat, soluble in glycerine, moderately so in water. This mixture was tried in Pasteur's institute and is supposed to possess greater antiseptic properties than the single ingredients. (*Deutsch. Med. Ziet.*, No. 98, 1892).

The antidyspeptic powder of Dujardin-Beaumetz.

℞ Bismuth Salicyl.....
Napthol .....aa 5, 0
Carbon Pulr. et Larat.....10, 0
Mix—Div. in part, arg., No. 20.
Sig.—One powder before each meal. If eructations or flatulence are present due to cancer of the stomach. Should diarrhœa be present he prescribes.

℞ Bismuth Salicyl.....10, 0
Salol et, Sod. Bicarb.....aa 5, 0
Mix—Div. in part 20.
Sig.—One powder before meals.
(*L'Un. Med.* 115, '92).

Supra pubic cystotomy in children. Dr. L. P. Alexandrow (*Archiv. of Klin. Chirurg.*, 41) reports twenty-six cases of sectio alta done in the last two years at the surgical department of St. Alga's Childrens' Hospital in Moskau. Of the twenty-six there were twenty-three done on children between the ages of two and a-half to seven years. Two were almost ten years and one five years. The operations are divided into three classes. The first class comprises two cases in which there was drainage from the bladder, complicated by fever, pyelites and hæmaturia. In the second class of sixteen cases the bladder was closed and the perivesical space was drained. Healing was complete between three to eighteen days. The third class embraces eight cases in which the entire wound was closed by the *etagennaht* or sectional suture. Of these eight cases, seven healed by first intention. One had vesical hemorrhage making it necessary to reopen the wound, and union was complete only after the 31st day. The materials used for sutures were silk and catgut.

Abstracts.

TAX ON QUACKS.

The recent suggestion of the Secretary of the Treasury that the tax on alcohol be increased fifty cents per gallon in order to raise more money for the increasing expenses of the Government seems to have met with a favorable response in some quarters, and the question of tariff and taxation will no doubt be considerably discussed by Congress in the near future.

In this connection the wisdom of putting a heavy and permanent tax on all forms of nostrums and quackery will at once commend itself to all wise legislators who are working for the public good. A stamp tax of this kind, say twenty-five per cent., on every form of secret or proprietary medicinal preparation of every kind, whether sold by the retailer, proprietor, manufacturer, or by advertising quack specialists, would be no hardship to the public, as it would in no wise affect the retail price of these articles. All such manufacturers could easily afford to give the Government twenty-five per cent. of the retail price and still have a very handsome profit left, as their net profit is rarely less than five hundred per cent., and often very much more.

Legitimate preparations of the Pharmacopœia and other standard preparations where the complete working formula is public property should be exempt. But as the success of quackery depends on secrecy and mystery, and as these two conditions enable unscrupulous persons to get a dollar for a few cents' worth of a simple remedy, it will be seen that there would be no injustice to any one if a good fair tax were put on the business.

If the Government went still further and required all nostrum and secret medicine manufacturers to pay a big license, and place on record open to public inspection a sworn statement of the exact composition, together with a complete working formula of each preparation, much good would result. And if, like insurance companies, they were also required to furnish heavy bonds or make a special deposit, which could be forfeited under proper restrictions, provided their medicine did not do all that was claimed for it, the public would be still better protected both in health and pocket, and no injustice would be done to the honest manufacturer of articles of real merit.

There is no good reason why the Government should not place the nostrum business on the same basis in its Internal Revenue Department as the manufacture of whiskey and tobacco. Analysis of these preparations should be made from time to time, and heavy penalties be imposed if they vary from the sworn formula on record, or if any dangerous drug like morphine is being used.

England, which is said to be a free trade country, taxes the nostrum business heavily, and derives a large and growing revenue from that source.—(To appear in January number of *New York Medical Times.*)

NERVOUS DISEASES IN LOW RACES AND STAGES OF CULTURE.

Among the errors which have been diligently disseminated by physicians who lacked ethnological information is that which claims that diseases of the nervous system, especially those of a hysterical character, have greatly increased with the development of civilization, and are most common in the races of highest culture.

Both assertions are erroneous. Those intelligent travellers who give the soundest information on this subject report that in uncultured nations violent and epidemic nervous seizures are very common. Castren describes them among the Siberic tribes. An unexpected blow on the outside of a tent will throw its occupants into spasms. The early Jesuit missionaries paint extraordinary pictures of epidemic nervous maladies among the Iroquois and Hurons. The Middle Ages witnessed scenes of this kind, impossible to-day.

In a late number of the *Journal de Medicine*, Paris, Dr. De la Tourette points out the frequency of true hysteria and hysteroid seizures in the Black race, among the Hottentots and Caffirs of East Africa, and among the natives of Abyssinia and Madagascar. They present frequent cases of classical hysterical attack and occasional epidemics of choreomania, affecting both sexes. A negress of the Soudan was lately a patient in the celebrated clinic of Dr. Charcot in Paris, and displayed the symptoms characteristic of neurosis. Civilization, so far from increasing this class of maladies, is one of the most efficient agents in reducing them in number and severity. When it is freed from certain elements not essential to it, especially religious excitement and competitive anxieties, it acts decidedly as a preventive.—Dr. Brinton, in *Science.*

Medical journals are the educators of medical men. As the California *Medical Journal* says, we know of nothing pertaining to medical literature, more interesting than the reading and comparison of medical journals. Some are devoted to surgery, some to medicine, some to hygiene, some to gynecology and some to all these various branches. In some we can see the careful diagnosis, the guarded prognosis and judicious treatment, begotten by years of painstaking conscientious work. Others are filled with the writings of enthusiastic theorists. In others we see the careful, conservative work of the experienced surgeon, and in others the work of the careless operators who are ever ready to operate, regardless of present conditions or future consequences. Any one who will read a half dozen different journals, and give their contents some thought may gain a valuable lesson not alone from the intrinsic value of each, but more especially from the comparison or contrasting of thought.—*Ex.*

NEWS AND MISCELLANY.

ALPHABET OF PROVERBS.

Denying a fault doubles it.
Knavery is the worst trade.
Foolish fear doubles danger.
Boasters are cousins to liars.
Richest is he that wants least.
Modesty is a guard to virture.
Upright walking is sure walking.
Quiet conscience is quiet sleep.
You never lose by doing a good act.
The boughs that bear most hang lowest.
He has hard work that has nothing to do.
One hour to-day is worth two to-morrow.
Envy shoots at others and wounds herself.
Zeal without knowledge is fire without light.
Proud looks make foul work in fair faces.
A grain of prudence is worth a pound of craft.
Learning makes a man fit company for himself.
Confession of a fault makes half amends.
Not to hear conscience is the way to silence it.
Virture and happiness are mother and daughter.
It costs more to revenge wrongs than to suffer them.
Wise men make more opportunities than they find.
Small faults indulged are little thieves that let in greater ones.—*The Tex. Health Jour.*

PERFUMES AND THE SENSE OF SMELL.

The olfactory sense is followed by effects of different kinds of intensity from those of sight and hearing, and may be accompanied by a kind of poisoning. The old medical books are full of stories of it. There are those of a girl killed by the exhalations of violets; of a woman seized with a violent headache from sleeping on a bed of roses; and of a girl who lost her voice by smelling of a bouquet. Ancient medicine attributed curative properties to perfumes, particularly to those of the rose, musk, and benzoin. The intensity of the effects of perfumes makes a rapid succession of sensations almost impossible, for consecutive odors cause a rapid anæsthesia of the senses; on the other hand, if the times separating two successive sensations are too long, it becomes impossible to combine them, and the anticipated effect is disturbed by strange feelings. In short, smell is rather the complement of other excitation like a melody or a picture. Its function is, nevertheless, very important. By virtue of its volatility it is a valuable prophylactic; by the great intensity of its effects it can bring about salutary modifications of physiological functions, particularly of the amplitude of respiration; and it possesses in the highest degree the luxurious character of every artistic enjoyment. Flavor has an essential part in nutrition; so has touch. Hearing and sight are indispensable to relation with other persons; but smell, necessary to the animal for finding its prey and avoiding danger, has become, under normal conditions, an almost useless sense to man, since the refinements of civilization tend to prevent the production of miasms and the pestilential odors from which he has to protect himself. It is therefore becoming more and more a sense of luxury for civilized man; and that perhaps, is the reason why poets, from the author of the Song of Songs down, have associated all kinds of beauty and joy with perfumes.—*Popular Science Monthly.*

The milk in the cocoanut may be extracted from the following occurring in an article by Dr. N. G. Whipple (Kansas City *Med. Rec.*): A strong point in the code is that physicians avoid giving publicity to their cases through the papers. In most of the appall.—*Med. Rev.*

BOOKS RECEIVED.

[In sending books for notice in the REPORTER, publishers are requested, for the information of the reader, as well as for their own advantage, to give the price. This announcement by title will be followed, in most cases, by a review, which will appear at the earliest opportunity.]

Hygienic Measures in Relation to Infectious Diseases. By George H. F. Nutall, M. D., Ph. D., (Gottengen). New York and London: G. P. Putman's Sons, 1893. Price, 75 cents.

Manual of Practical Medical and Physiological Chemistry. By Charles E. Pellew, E. M. New York: D. Appleton & Co., 1892. Price $2.50.

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The Anatomy of the Peritoneum. By Franklin Dexter, M. D. D. Appleton & Co., 1892.

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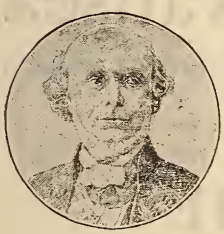

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BY HERMANN GOLDENBERG, M. D.

It is well known that pyrogallic acid is by no means a harmless drug. After its introduction into dermatological practice NEISSER lost a patient after one application. The patient died on the third day with symptoms of intoxication. VIDAL has likewise reported the death of a patient, eighteen years old, who had used a ten per cent. pyrogallic ointment for two weeks. This poisonous effect of pyrogallic acid is to be attributed to the great readiness with which it is oxidized in alkaline solutions (being so intensely reducing).

Gallacetophenone does not possess this quality and is absolutely harmless, as has been proven by experiments on animals.

It displays strong antiseptic qualities. A one per cent. solution added to chopped meat prevented its becoming putrid for twenty-one days, and destroyed the *Streptococcus aureus* within twenty-four hours.

Since the middle of October I have employed it, both in private and in dispensary practice, on at least thirty patients suffering from various skin diseases.

On account of its resemblance to pyrogallic acid, it seemed to be indicated in psoriasis. I have been so much more inclined to use it in that disease, since VON REKOWSKI, who tried it in a few cases only, maintains "that the effect of this new preparation (used as a ten per cent. ointment) is noticed within twelve hours."

Altogether, I have thus employed it in twelve cases of psoriasis—in all of them with good results. Within a few days the patches became paler and thinner, the desquamation ceased or became less, and involution took place in the centers. Usually after the lapse of from ten to twelve days only a slight hyperæmia was left. Within from two to three weeks the patches disappeared entirely without leaving any pigmentation.

A ten per cent. ointment did not produce any marked irritation or discolor the skin. It stains the clothes slightly yellowish, much less than pyrogallic acid or chrysarobin. In the case of psoriasis of the face and scalp it really acted like a specific. The eruption, which was quite profuse, disappeared within five days, A ten per cent. ointment was applied twice daily. There was no other treatment

Another patient with a universal psoriasis of sixteen years' standing, who applied to my department at Mount Sinai Dispensary for some other trouble, was induced to use a ten per cent. salve of gallacetophenone for the forehead and scalp, which were thickly covered with psoriatic patches. When he returned, two weeks later, there was nothing left but a pigmentat on of the forehead, while the psoriasis of the body which had not been treated was *in statu quo ante.*

My friend, DR. G.T. ELLIOT, has, at my request, used gallacetophenone on a patient with psoriasis of eight years' standing, distributed over the trunk, knees, elbows, scalp, and face in patches of various sizes. The case had been under treatment the whole time and had proved exceedingly rebellious. Arsenic caused an increase of inflammatory symptoms. Pyrogallic acid had been used with but moderate success. Chysarobin did well, if used persistently. At the time (November 21st) when the use of a ten per cent. gallacetophenone ointment was begun, the patches were bright red, burning, and with abundant desquamation. A week later the patches were paler and breaking up into small papules. The centers had undergone involution and the desquamation was very little Under the further use the improvement continued. DR. ELLIOT concludes his report with the following words: "From this slight experience, gallacetophenone appears to me to promise to be the most satisfactory local remedy for psoriasis and superior to all others. It produces no inflammatory reaction or pigmentation, but seems to influence immediately the lesions."

From my experience, I feel justified in recommending gallacetophenone as an excellent remedy for psoriasis, for it acts in some cases more promptly than chrysarobin—in all the cases which I have treated, as well if not better than the other remedies at our disposal. As it is harmless and does not discolor the skin or hair, I hope it will be found to be one of the best local remedies for psoriasis of the body, face, and scalp.

My results in a number of cases of eczema psoriti-forme and seborrhoicum have been so gratifying and encouraging that I should like to include these affections in its field of usefulness.—*N. Y. Med. Jour.*

JULIA W. CARPENTER, M. D., (*Cinn. Lancet Clinic*), also speaks of the rapid, almost specific, action of GALLACETOPHENONE in a very rebellious case of psoriasis.

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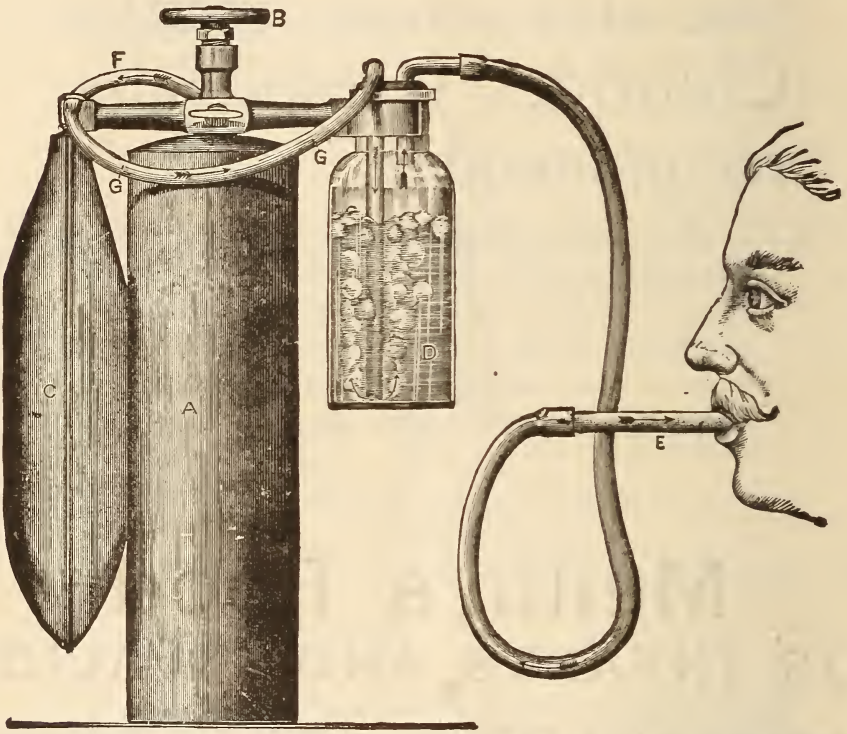

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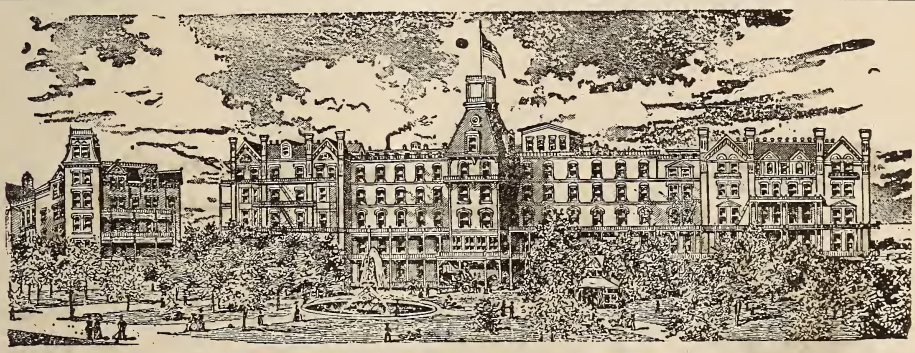

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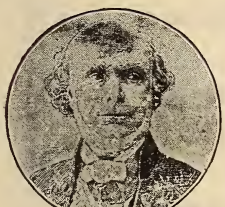

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"We know that phenic acid, from the point of view of its local action, presents certain analogies with cocaine; like the latter, it produces ischæmia and insensibility of the tissues. We would therefore expect that a combination of the two substances, under the form of phenate of cocaine, would have therapeutic properties, superior to those of the muriate of cocaine. This has been found to be the case by a Bavarian physician, DR VON OEFELE, who has for some time past employed the phenate of cocaine exclusively in the place of the muriate."

He has found that the phenic salt exercises an analgesic action much more persistent than that of the muriate, while the chances of producing toxic effects are much less. Gluck was accustomed to add carbolic acid to his solutions of cocaine for the purpose of diminishing the chances of producing disagreeable results. These properties and advantages are explained by the fact that the phenic salt is almost entirely insoluble in water. Not being dissolved by the juices of the organism, the phenate of cocaine, employed as a local application, is absorbed but little or not at all, whence the absence of intoxication and the persistence of the analgesic action, which may last as long as thirty-six hours. Phenate of cocaine may be given internally as well as in hypodermic injection.—*La Semaine Med.*

GALLACETOPHENONE, A NEW DERMATO-THERAPEUTIC AGENT.

BY HERMANN GOLDENBERG, M. D.

It is well known that pyrogallic acid is by no means a harmless drug. After its introduction into dermatological practice NEISSER lost a patient after one application. The patient died on the third day with symptoms of intoxication. VIDAL has likewise reported the death of a patient, eighteen years old, who had used a ten per cent. pyrogallic ointment for two weeks. This poisonous effect of pyrogallic acid is to be attributed to the great readiness with which it is oxidized in alkaline solutions (being so intensely reducing).

Gallacetophenone does not possess this quality and is absolutely harmless, as has been proven by experiments on animals.

It displays strong antiseptic qualities. A one per cent. solution added to chopped meat prevented its becoming putrid for twenty-one days, and destroyed the *Streptococcus aureus* within twenty-four hours.

Since the middle of October I have employed it, both in private and in dispensary practice, on at least thirty patients suffering from various skin diseases.

On account of its resemblance to pyrogallic acid, it seemed to be indicated in psoriasis. I have been so much more inclined to use it in that disease, since VON REKOWSKI, who tried it in a few cases only, maintains "that the effect of this new preparation (used as a ten per cent. ointment) is noticed within twelve hours."

Altogether, I have thus employed it in twelve cases of psoriasis—in all of them with good results. Within a few days the patches became paler and thinner, the desquamation ceased or became less, and involution took place in the centers. Usually after the lapse of from ten to twelve days only a slight hyperæmia was left. Within from two to three weeks the patches disappeared entirely without leaving any pigmentation.

A ten per cent. ointment did not produce any marked irritation or discolor the skin. It stains the clothes slightly yellowish, much less than pyrogallic acid or chrysarobin. In the case of psoriasis of the face and scalp it really acted like a specific. The eruption, which was quite profuse, disappeared within five days, A ten per cent. ointment was applied twice daily. There was no other treatment

Another patient with a universal psoriasis of sixteen years' standing, who applied to my department at Mount Sinai Dispensary for some other trouble, was induced to use a ten per cent. salve of gallacetophenone for the forehead and scalp, which were thickly covered with psoriatic patches. When he returned, two weeks later, there was nothing left but a pigmentat on of the forehead, while the psoriasis of the body which had not been treated was *in statu quo ante.*

My friend, DR. G.T. ELLIOT, has, at my request, used gallacetophenone on a patient with psoriasis of eight years' standing, distributed over the trunk, knees, elbows, scalp, and face in patches of various sizes. The case had been under treatment the whole time and had proved exceedingly rebellious. Arsenic caused an increase of inflammatory symptoms. Pyrogallic acid had been used with but moderate success. Chrysarobin did well, if used persistently. At the time (November 21st) when the use of a ten per cent. gallacetophenone ointment was begun, the patches were bright red, burning, and with abundant desquamation. A week later the patches were paler and breaking up into small papules. The centers had undergone involution and the desquamation was very little. Under the further use the improvement continued. DR. ELLIOT concludes his report with the following words: "From this slight experience, gallacetophenone appears to me to promise to be the most satisfactory local remedy for psoriasis and superior to all others. It produces no inflammatory reaction or pigmentation, but seems to influence immediately the lesions."

From my experience, I feel justified in recommending gallacetophenone as an excellent remedy for psoriasis, for it acts in some cases more promptly than chrysarobin—in all the cases which I have treated, as well if not better than the other remedies at our disposal. As it is harmless and does not discolor the skin or hair, I hope it will be found to be one of the best local remedies for psoriasis of the body, face, and scalp.

My results in a number of cases of eczema psoriti-forme and seborrhoicum have been so gratifying and encouraging that I should like to include these affections in its field of usefulness.—*N. Y. Med. Jour.*

JULIA W. CARPENTER, M. D., (*Cinn. Lancet Clinic*), also speaks of the rapid, almost specific, action of GALLACETOPHENONE in a very rebellious case of psoriasis.

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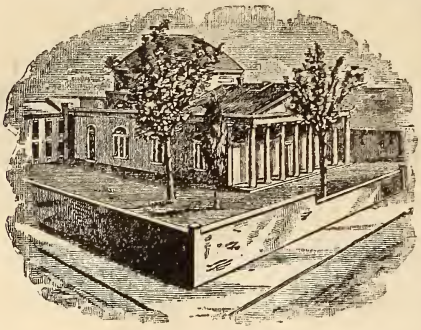

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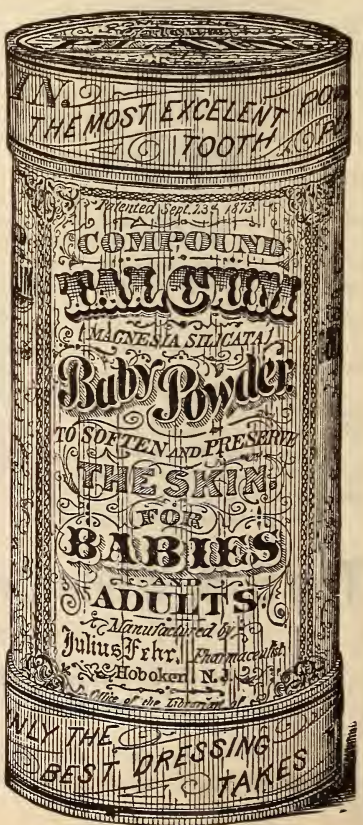

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My friend, DR. G.T. ELLIOT, has, at my request, used gallacetophenone on a patient with psoriasis of eight years' standing, distributed over the trunk, knees, elbows, scalp, and face in patches of various sizes. The case had been under treatment the whole time and had proved exceedingly rebellious. Arsenic caused an increase of inflammatory symptoms. Pyrogallic acid had been used with but moderate success. Chysarobin did well, if used persistently. At the time (November 21st) when the use of a ten per cent. gallacetophenone ointment was begun, the patches were bright red, burning, and with abundant desquamation. A week later the patches were paler and breaking up into small papules. The centers had undergone involution and the desquamation was very little Under the further use the improvement continued. DR. ELLIOT concludes his report with the following words: "From this slight experience, gallacetophenone appears to me to promise to be the most satisfactory local remedy for psoriasis and superior to all others. It produces no inflammatory reaction or pigmentation, but seems to influence immediately the lesions."

From my experience, I feel justified in recommending gallacetophenone as an excellent remedy for psoriasis, for it acts in some cases more promptly than chrysarobin—in all the cases which I have treated, as well if not better than the other remedies at our disposal. As it is harmless and does not discolor the skin or hair, I hope it will be found to be one of the best local remedies for psoriasis of the body, face, and scalp.

My results in a number of cases of eczema psoritiforme and seborrhoicum have been so gratifying and encouraging that I should like to include these affections in its field of usefulness.—*N. Y. Med. Jour.*

JULIA W. CARPENTER, M. D., (*Cinn. Lancet Clinic*), also speaks of the rapid, almost specific, action of GALLACETOPHENONE in a very rebellious case of psoriasis.

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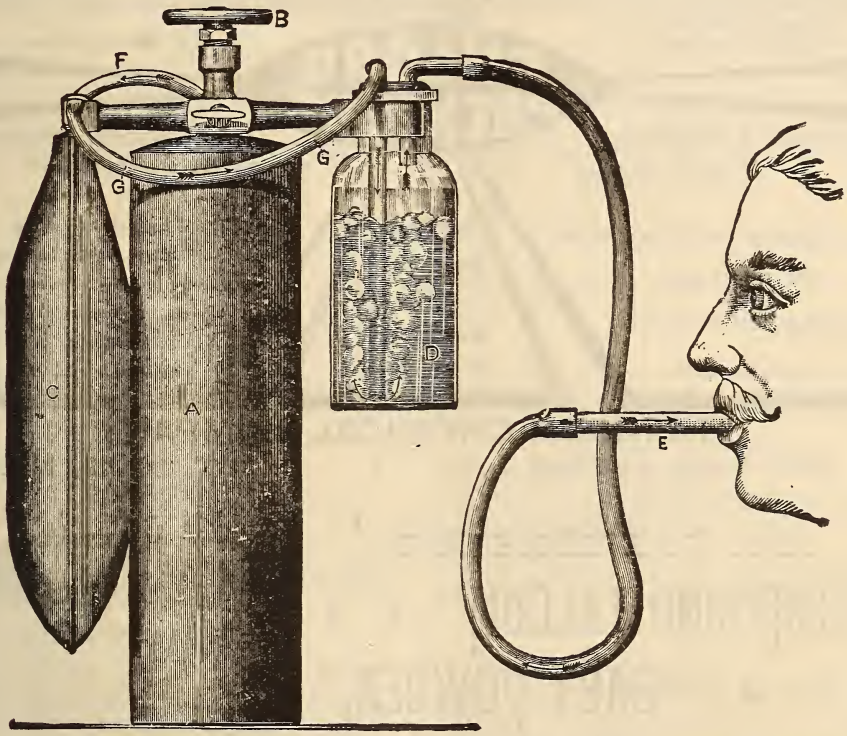

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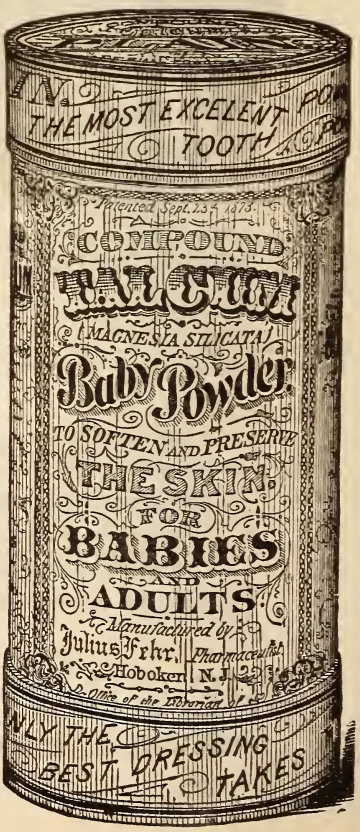

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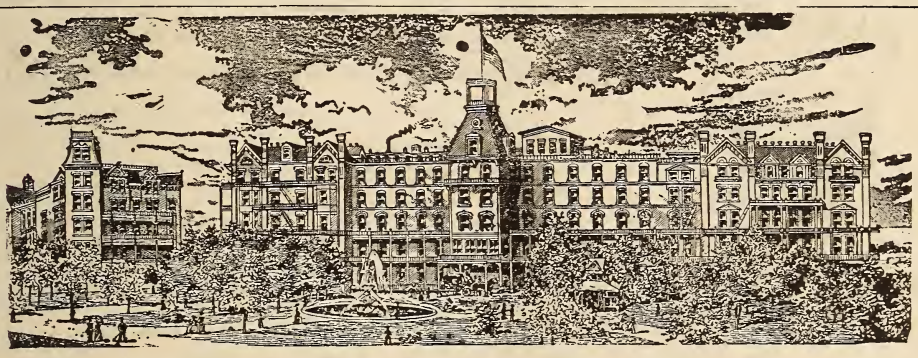

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Editorial Druggist's Circular,
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He has found that the phenic salt exercises an analgesic action much more persistent than that of the muriate, while the chances of producing toxic effects are much less. Gluck was accustomed to add carbolic acid to his solutions of cocaine for the purpose of diminishing the chances of producing disagreeable results. These properties and advantages are explained by the fact that the phenic salt is almost entirely insoluble in water. Not being dissolved by the juices of the organism, the phenate of cocaine, employed as a local application, is absorbed but little or not at all, whence the absence of intoxication and the persistence of the analgesic action, which may last as long as thirty-six hours. Phenate of cocaine may be given internally as well as in hypodermic injection.—*La Semaine Med.*

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BY HERMANN GOLDENBERG, M. D.

It is well known that pyrogallic acid is by no means a harmless drug. After its introduction into dermatological practice NEISSER lost a patient after one application. The patient died on the third day with symptoms of intoxication. VIDAL has likewise reported the death of a patient, eighteen years old, who had used a ten per cent. pyrogallic ointment for two weeks. This poisonous effect of pyrogallic acid is to be attributed to the great readiness with which it is oxidized in alkaline solutions (being so intensely reducing).

Gallacetophenone does not possess this quality and is absolutely harmless, as has been proven by experiments on animals.

It displays strong anti-eptic qualities. A one per cent. solution added to chopped meat prevented its becoming putrid for twenty-one days, and destroyed the *Streptococcus aureus* within twenty-four hours.

Since the middle of October I have employed it, both in private and in dispensary practice, on at least thirty patients suffering from various skin diseases.

On account of its resemblance to pyrogallic acid, it seemed to be indicated in psoriasis. I have been so much more inclined to use it in that disease, since VON REKOWSKI, who tried it in a few cases only, maintains "that the effect of this new preparation (used as a ten per cent. ointment) is noticed within twelve hours."

Altogether, I have thus employed it in twelve cases of psoriasis—in all of them with good results. Within a few days the patches became paler and thinner, the desquamation ceased or became less, and involution took place in the centers. Usually after the lapse of from ten to twelve days only a slight hyperæmia was left. Within from two to three weeks the patches disappeared entirely without leaving any pigmentation.

A ten per cent. ointment did not produce any marked irritation or discolor the skin. It stains the clothes slightly yellowish, much less than pyrogallic acid or chrysarobin. In the case of psoriasis of the face and scalp it really acted like a specific. The eruption, which was quite profuse, disappeared within five days. A ten per cent. ointment was applied twice daily. There was no other treatment

Another patient with a universal psoriasis of sixteen years' standing, who applied to my department at Mount Sinai Dispensary for some other trouble, was induced to use a ten per cent. salve of gallacetophenone for the forehead and scalp, which were thickly covered with psoriatic patches. When he returned, two weeks later, there was nothing left but a pigmentation of the forehead, while the psoriasis of the body which had not been treated was *in statu quo ante.*

My friend, DR. G.T. ELLIOT, has, at my request, used gallacetophenone on a patient with psoriasis of eight years' standing, distributed over the trunk, knees, elbows, scalp, and face in patches of various sizes. The case had been under treatment the whole time and had proved exceedingly rebellious. Arsenic caused an increase of inflammatory symptoms. Pyrogallic acid had been used with but moderate success Chrysarobin did well, if used persistently. At the time (November 21st) when the use of a ten per cent. gallacetophenone ointment was begun, the patches were bright red, burning, and with abundant desquamation. A week later the patches were paler and breaking up into small papules. The centers had undergone involution and the desquamation was very little Under the further use the improvement continued. DR. ELLIOT concludes his report with the following words: "From this slight experience, gallacetophenone appears to me to promise to be the most satisfactory local remedy for psoriasis and superior to all others. It produces no inflammatory reaction or pigmentation, but seems to influence immediately the lesions."

From my experience, I feel justified in recommending gallacetophenone as an excellent remedy for psoriasis, for it acts in some cases more promptly than chrysarobin—in all the cases which I have treated, as well if not better than the other remedies at our disposal. As it is harmless and does not discolor the skin or hair, I hope it will be found to be one of the best local remedies for psoriasis of the body, face, and scalp.

My results in a number of cases of eczema psoriti-forme and seborrhoicum have been so gratifying and encouraging that I should like to include these affections in its field of usefulness.—*N. Y. Med. Jour.*

JULIA W. CARPENTER, M. D., (*Cinn. Lancet Clinic*), also speaks of the rapid, almost specific, action of GALLACETOPHENONE in a very rebellious case of psoriasis.

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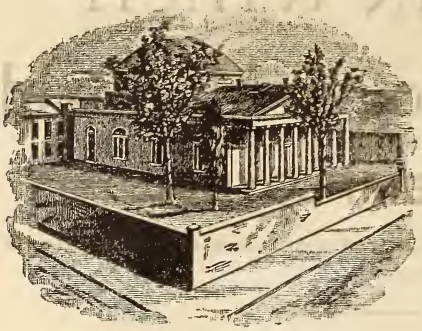

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It is well known that pyrogallic acid is by no means a harmless drug. After its introduction into dermatological practice NEISSER lost a patient after one application. The patient died on the third day with symptoms of intoxication. VIDAL has likewise reported the death of a patient, eighteen years old, who had used a ten per cent. pyrogallic ointment for two weeks. This poisonous effect of pyrogallic acid is to be attributed to the great readiness with which it is oxidized in alkaline solutions (being so intensely reducing).

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It displays strong antiseptic qualities. A one per cent. solution added to chopped meat prevented its becoming putrid for twenty-one days, and destroyed the *Streptococcus aureus* within twenty-four hours.

Since the middle of October I have employed it, both in private and in dispensary practice, on at least thirty patients suffering from various skin diseases.

On account of its resemblance to pyrogallic acid, it seemed to be indicated in psoriasis. I have been so much more inclined to use it in that disease, since VON REKOWSKI, who tried it in a few cases only, maintains "that the effect of this new preparation (used as a ten per cent. ointment) is noticed within twelve hours."

Altogether, I have thus employed it in twelve cases of psoriasis—in all of them with good results. Within a few days the patches became paler and thinner, the desquamation ceased or became less, and involution took place in the centers. Usually after the lapse of from ten to twelve days only a slight hyperæmia was left. Within from two to three weeks the patches disappeared entirely without leaving any pigmentation.

A ten per cent. ointment did not produce any marked irritation or discolor the skin. It stains the clothes slightly yellowish, much less than pyrogallic acid or chrysarobin. In the case of psoriasis of the face and scalp it really acted like a specific. The eruption, which was quite profuse, disappeared within five days. A ten per cent. ointment was applied twice daily. There was no other treatment

Another patient with a universal psoriasis of sixteen years' standing, who applied to my department at Mount Sinai Dispensary for some other trouble, was induced to use a ten per cent. salve of gallacetophenone for the forehead and scalp, which were thickly covered with psoriatic patches. When he returned, two weeks later, there was nothing left but a pigmentation of the forehead, while the psoriasis of the body which had not been treated was *in statu quo ante.*

My friend, DR. G. T. ELLIOT, has, at my request, used gallacetophenone on a patient with psoriasis of eight years' standing, distributed over the trunk, knees, elbows, scalp, and face in patches of various sizes. The case had been under treatment the whole time and had proved exceedingly rebellious. Arsenic caused an increase of inflammatory symptoms. Pyrogallic acid had been used with but moderate success. Chysarobin did well, if used persistently. At the time (November 21st) when the use of a ten per cent. gallacetophenone ointment was begun, the patches were bright red, burning, and with abundant desquamation. A week later the patches were paler and breaking up into small papules. The centers had undergone involution and the desquamation was very little. Under the further use the improvement continued. DR. ELLIOT concludes his report with the following words: "From this slight experience, gallacetophenone appears to me to promise to be the most satisfactory local remedy for psoriasis and superior to all others. It produces no inflammatory reaction or pigmentation, but seems to influence immediately the lesions."

From my experience, I feel justified in recommending gallacetophenone as an excellent remedy for psoriasis, for it acts in some cases more promptly than chrysarobin—in all the cases which I have treated, as well if not better than the other remedies at our disposal. As it is harmless and does not discolor the skin or hair, I hope it will be found to be one of the best local remedies for psoriasis of the body, face, and scalp.

My results in a number of cases of eczema psoriti-forme and seborrhoicum have been so gratifying and encouraging that I should like to include these affections in its field of usefulness.—*N. Y. Med. Jour.*

JULIA W. CARPENTER, M. D., (*Cinn. Lancet Clinic*), also speaks of the rapid, almost specific, action of GALLACETOPHENONE in a very rebellious case of psoriasis.

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Or, the person may not be able to think as quickly as he should. To test this, ask the patient three simple questions in rapid succession, as, Where were you just before you came into this room? What were you doing? How long did you remain? The rapidity with which the answers are given indicate the rapidity of brain action.

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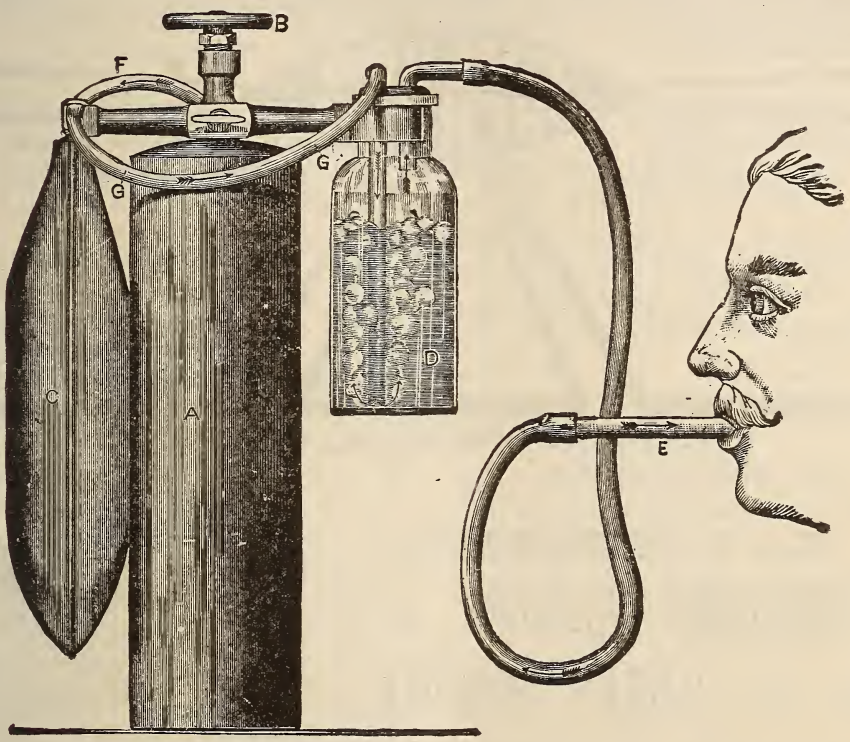

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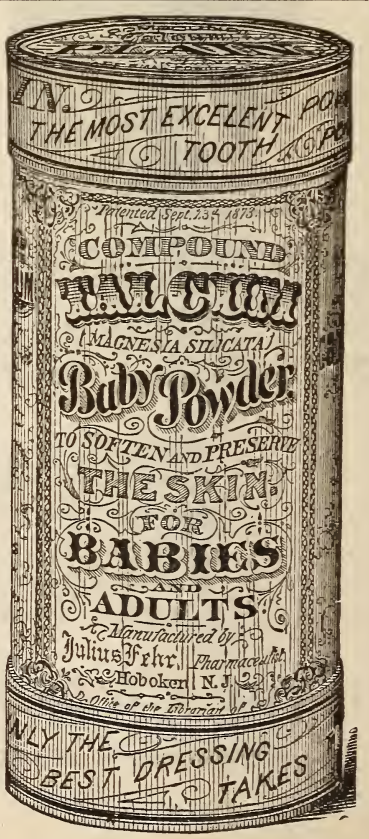

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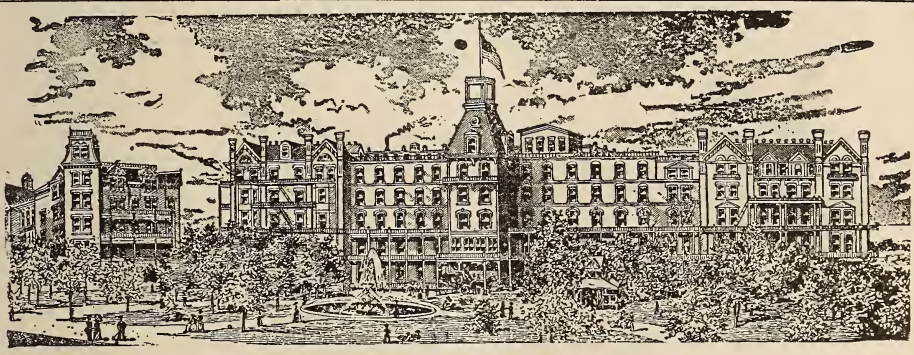

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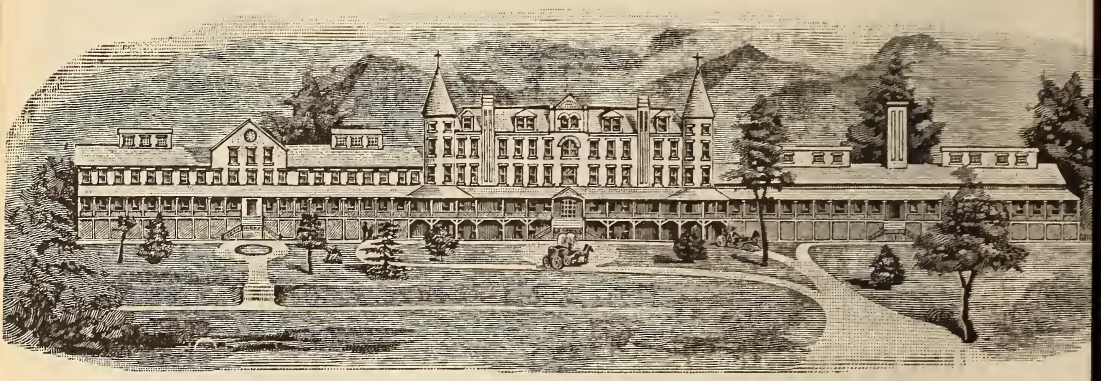

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He has found that the phenic salt exercises an analgesic action much more persistent than that of the muriate, while the chances of producing toxic effects are much less. Gluck was accustomed to add carbolic acid to his solutions of cocaine for the purpose of diminishing the chances of producing disagreeable results. These properties and advantages are explained by the fact that the phenic salt is almost entirely insoluble in water. Not being dissolved by the juices of the organism, the phenate of cocaine, employed as a local application, is absorbed but little or not at all, whence the absence of intoxication and the persistence of the analgesic action, which may last as long as thirty-six hours. Phenate of cocaine may be given internally as well as in hypodermic injection.—*La Semaine Med.*

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BY HERMANN GOLDENBERG, M. D.

It is well known that pyrogallic acid is by no means a harmless drug. After its introduction into dermatological practice NEISSER lost a patient after one application. The patient died on the third day with symptoms of intoxication. VIDAL has likewise reported the death of a patient, eighteen years old, who had used a ten per cent. pyrogallic ointment for two weeks. This poisonous effect of pyrogallic acid is to be attributed to the great readiness with which it is oxidized in alkaline solutions (being so intensely reducing).

Gallacetophenone does not possess this quality and is absolutely harmless, as has been proven by experiments on animals.

It displays strong antiseptic qualities. A one per cent. solution added to chopped meat prevented its becoming putrid for twenty-one days, and destroyed the *Streptococcus aureus* within twenty-four hours.

Since the middle of October I have employed it, both in private and in dispensary practice, on at least thirty patients suffering from various skin diseases.

On account of its resemblance to pyrogallic acid, it seemed to be indicated in psoriasis. I have been so much more inclined to use it in that disease, since VON REKOWSKI, who tried it in a few cases only, maintains "that the effect of this new preparation (used as a ten per cent. ointment) is noticed within twelve hours."

Altogether, I have thus employed it in twelve cases of psoriasis—in all of them with good results. Within a few days the patches became paler and thinner, the desquamation ceased or became less, and involution took place in the centers. Usually after the lapse of from ten to twelve days only a slight hyperæmia was left. Within from two to three weeks the patches disappeared entirely without leaving any pigmentation.

A ten per cent. ointment did not produce any marked irritation or discolor the skin. It stains the clothes slightly yellowish, much less than pyrogallic acid or chrysarobin. In the case of psoriasis of the face and scalp it really acted like a specific. The eruption, which was quite profuse, disappeared within five days, A ten per cent. ointment was applied twice daily. There was no other treatment

Another patient with a universal psoriasis of sixteen years' standing, who applied to my department at Mount Sinai Dispensary for some other trouble, was induced to use a ten per cent. salve of gallacetophenone for the forehead and scalp, which were thickly covered with psoriatic patches. When he returned, two weeks later, there was nothing left but a pigmentation of the forehead, while the psoriasis of the body which had not been treated was *in statu quo ante.*

My friend, DR. G.T. ELLIOT, has, at my request, used gallacetophenone on a patient with psoriasis of eight years' standing, distributed over the trunk, knees, elbows, scalp, and face in patches of various sizes. The case had been under treatment the whole time and had proved exceedingly rebellious. Arsenic caused an increase of inflammatory symptoms. Pyrogallic acid had been used with but moderate success. Chysarobin did well, if used persistently. At the time (November 21st) when the use of a ten per cent. gallacetophenone ointment was begun, the patches were bright red, burning, and with abundant desquamation. A week later the patches were paler and breaking up into small papules. The centers had undergone involution and the desquamation was very little Under the further use the improvement continued. DR. ELLIOT concludes his report with the following words: "From this slight experience, gallacetophenone appears to me to promise to be the most satisfactory local remedy for psoriasis and superior to all others. It produces no inflammatory reaction or pigmentation, but seems to influence immediately the lesions."

From my experience, I feel justified in recommending gallacetophenone as an excellent remedy for psoriasis, for it acts in some cases more promptly than chrysarobin—in all the cases which I have treated, as well if not better than the other remedies at our disposal. As it is harmless and does not discolor the skin or hair, I hope it will be found to be one of the best local remedies for psoriasis of the body, face, and scalp.

My results in a number of cases of eczema psoriti-forme and seborrhoicum have been so gratifying and encouraging that I should like to include these affections in its field of usefulness.—*N. Y. Med. Jour.*

JULIA W. CARPENTER, M. D., (*Cinn. Lancet Clinic*), also speaks of the rapid, almost specific, action of GALLACETOPHENONE in a very rebellious case of psoriasis.

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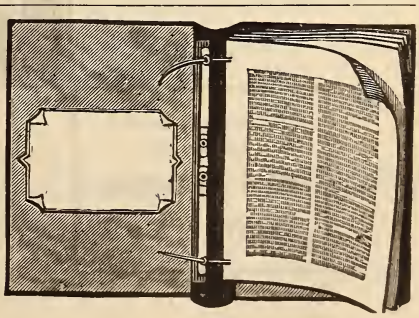

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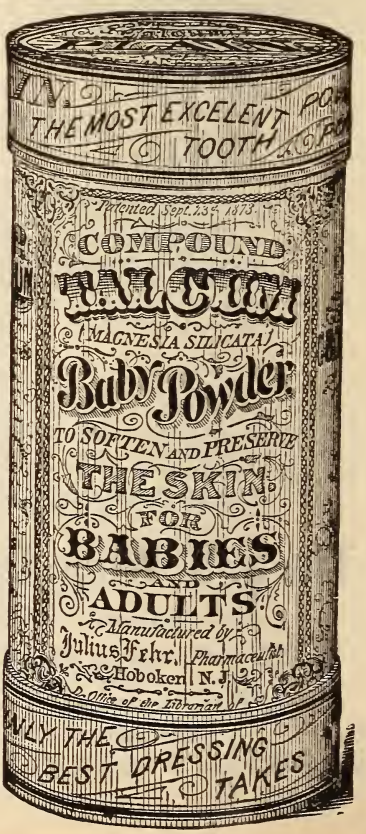

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"We know that phenic acid, from the point of view of its local action, presents certain analogies with cocaine; like the latter, it produces ischæmia and insensibility of the tissues. We would therefore expect that a combination of the two substances, under the form of phenate of cocaine, would have therapeutic properties, superior to those of the muriate of cocaine. This has been found to be the case by a Bavarian physician, DR. VON OEFELE, who has for some time past employed the phenate of cocaine exclusively in the place of the muriate."

He has found that the phenic salt exercises an analgesic action much more persistent than that of the muriate, while the chances of producing toxic effects are much less. Gluck was accustomed to add carbolic acid to his solutions of cocaine for the purpose of diminishing the chances of producing disagreeable results. These properties and advantages are explained by the fact that the phenic salt is almost entirely insoluble in water. Not being dissolved by the juices of the organism, the phenate of cocaine, employed as a local application, is absorbed but little or not at all, whence the absence of intoxication and the persistence of the analgesic action, which may last as long as thirty-six hours. Phenate of cocaine may be given internally as well as in hypodermic injection.—*La Semaine Med.*

GALLACETOPHENONE, A NEW DERMATO-THERAPEUTIC AGENT.

BY HERMANN GOLDENBERG, M. D.

It is well known that pyrogallic acid is by no means a harmless drug. After its introduction into dermatological practice NEISSER lost a patient after one application. The patient died on the third day with symptoms of intoxication. VIDAL has likewise reported the death of a patient, eighteen years old, who had used a ten per cent. pyrogallic ointment for two weeks. This poisonous effect of pyrogallic acid is to be attributed to the great readiness with which it is oxidized in alkaline solutions (being so intensely reducing).

Gallacetophenone does not possess this quality and is absolutely harmless, as has been proven by experiments on animals.

It displays strong antiseptic qualities. A one per cent. solution added to chopped meat prevented its becoming putrid for twenty-one days, and destroyed the *Streptococcus aureus* within twenty-four hours.

Since the middle of October I have employed it, both in private and in dispensary practice, on at least thirty patients suffering from various skin diseases.

On account of its resemblance to pyrogallic acid, it seemed to be indicated in psoriasis. I have been so much more inclined to use it in that disease, since VON REKOWSKI, who tried it in a few cases only, maintains "that the effect of this new preparation (used as a ten per cent. ointment) is noticed within twelve hours."

Altogether, I have thus employed it in twelve cases of psoriasis—in all of them with good results. Within a few days the patches became paler and thinner, the desquamation ceased or became less, and involution took place in the centers. Usually after the lapse of from ten to twelve days only a slight hyperæmia was left. Within from two to three weeks the patches disappeared entirely without leaving any pigmentation.

A ten per cent. ointment did not produce any marked irritation or discolor the skin. It stains the clothes slightly yellowish, much less than pyrogallic acid or chrysarobin. In the case of psoriasis of the face and scalp it really acted like a specific. The eruption, which was quite profuse, disappeared within five days, A ten per cent. ointment was applied twice daily. There was no other treatment

Another patient with a universal psoriasis of sixteen years' standing, who applied to my department at Mount Sinai Dispensary for some other trouble, was induced to use a ten per cent. salve of gallacetophenone for the forehead and scalp, which were thickly covered with psoriatic patches. When he returned, two weeks later, there was nothing left but a pigmentat on of the forehead, while the psoriasis of the body which had not been treated was *in statu quo ante.*

My friend, DR. G.T. ELLIOT, has, at my request, used gallacetophenone on a patient with psoriasis of eight years' standing, distributed over the trunk, knees, elbows, scalp, and face in patches of various sizes. The case had been under treatment the whole time and had proved exceedingly rebellious. Arsenic caused an increase of inflammatory symptoms. Pyrogallic acid had been used with but moderate success. Chysarobin did well, if used persistently. At the time (November 21st) when the use of a ten per cent. gallacetophenone ointment was begun, the patches were bright red, burning, and with abundant desquamation. A week later the patches were paler and breaking up into small papules. The centers had undergone involution and the desquamation was very little. Under the further use the improvement continued. DR. ELLIOT concludes his report with the following words: "From this slight experience, gallacetophenone appears to me to promise to be the most satisfactory local remedy for psoriasis and superior to all others. It produces no inflammatory reaction or pigmentation, but seems to influence immediately the lesions."

From my experience, I feel justified in recommending gallacetophenone as an excellent remedy for psoriasis, for it acts in some cases more promptly than chrysarobin—in all the cases which I have treated, as well if not better than the other remedies at our disposal. As it is harmless and does not discolor the skin or hair, I hope it will be found to be one of the best local remedies for psoriasis of the body, face, and scalp.

My results in a number of cases of eczema psoriti-forme and seborrhoicum have been so gratifying and encouraging that I should like to include these affections in its field of usefulness.—*N. Y. Med. Jour.*

JULIA W. CARPENTER, M. D., (*Cinn. Lancet Clinic*), also speaks of the rapid, almost specific, action of GALLACETOPHENONE in a very rebellious case of psoriasis.

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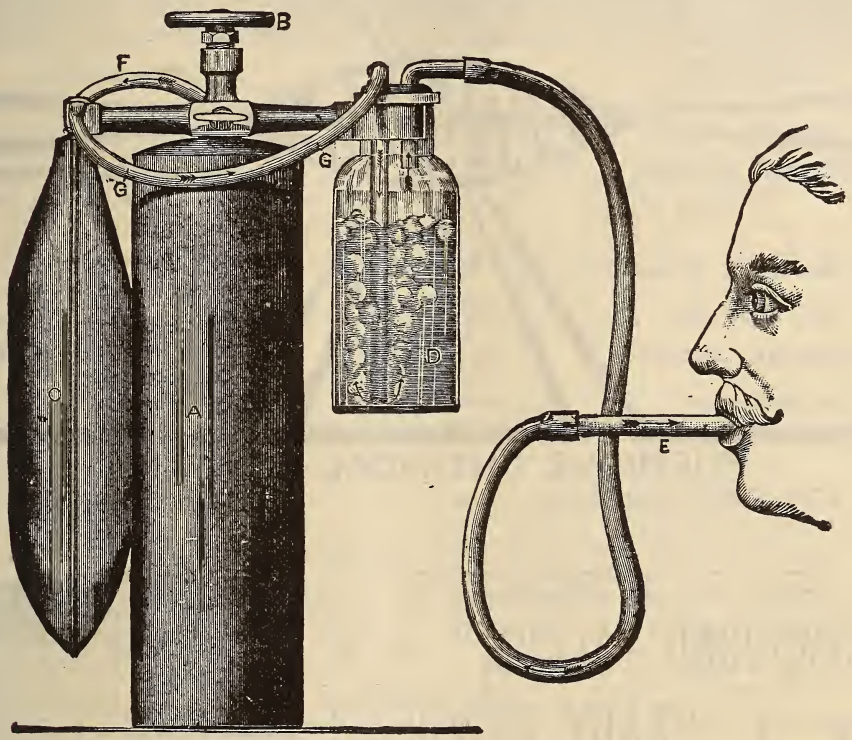

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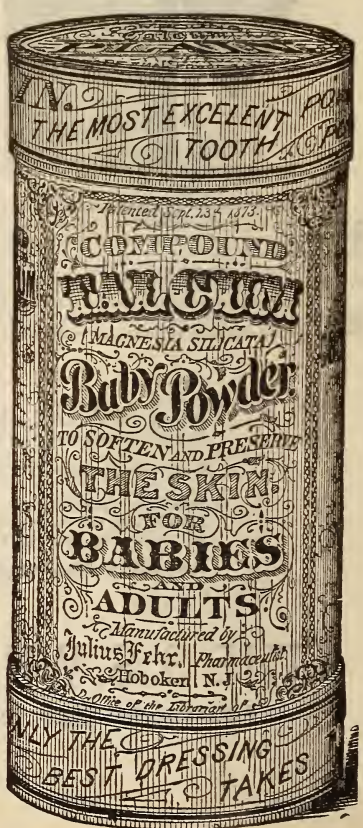

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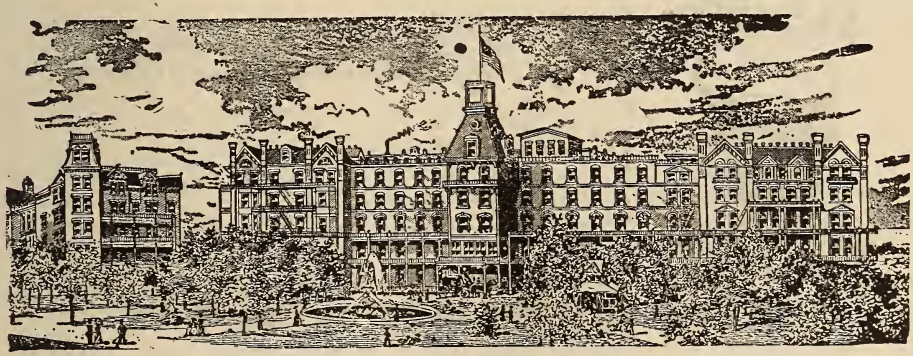

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Editorial Druggist's Circular,
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"We know that phenic acid, from the point of view of its local action, presents certain analogies with cocaine; like the latter, it produces ischæmia and insensibility of the tissues. We would therefore expect that a combination of the two substances, under the form of phenate of cocaine, would have therapeutic properties, superior to those of the muriate of cocaine. This has been found to be the case by a Bavarian physician, DR. VON OEFELE, who has for some time past employed the phenate of cocaine exclusively in the place of the muriate."

He has found that the phenic salt exercises an analgesic action much more persistent than that of the muriate, while the chances of producing toxic effects are much less. Gluck was accustomed to add carbolic acid to his solutions of cocaine for the purpose of diminishing the chances of producing disagreeable results. These properties and advantages are explained by the fact that the phenic salt is almost entirely insoluble in water. Not being dissolved by the juices of the organism, the phenate of cocaine, employed as a local application, is absorbed but little or not at all, whence the absence of intoxication and the persistence of the analgesic action, which may last as long as thirty-six hours. Phenate of cocaine may be given internally as well as in hypodermic injection.—*La Semaine Med.*

GALLACETOPHENONE, A NEW DERMATO-THERAPEUTIC AGENT.

BY HERMANN GOLDENBERG, M. D.

It is well known that pyrogallic acid is by no means a harmless drug. After its introduction into dermatological practice NEISSER lost a patient after one application. The patient died on the third day with symptoms of intoxication. VIDAL has likewise reported the death of a patient eighteen years old, who had used a ten per cent. pyrogallic ointment for two weeks. This poisonous effect of pyrogallic acid is to be attributed to the great readiness with which it is oxidized in alkaline solutions (being so intensely reducing).

Gallacetophenone does not possess this quality and is absolutely harmless, as has been proven by experiments on animals.

It displays strong anti eptic qualities. A one per cent. solution added to chopped meat prevented its becoming putrid for twenty-one days, and destroyed the *Streptococcus aureus* within twenty-four hours.

Since the middle of October I have employed it, both in private and in dispensary practice, on at least thirty patients suffering from various skin diseases.

On account of its resemblance to pyrogallic acid, it seemed to be indicated in psoriasis. I have been so much more inclined to use it in that disease, since VON REKOWSKI, who tried it in a few cases only, maintains "that the effect of this new preparation (used as a ten per cent. ointment) is noticed within twelve hours."

Altogether, I have thus employed it in twelve cases of psoriasis—in all of them with good results. Within a few days the patches became paler and thinner, the desquamation ceased or became less, and involution took place in the centers. Usually after the lapse of from ten to twelve days only a slight hyperæmia was left. Within from two to three weeks the patches disappeared entirely without leaving any pigmentation.

A ten per cent. ointment did not produce any marked irritation or discolor the skin. It stains the clothes slightly yellowish, much less than pyrogallic acid or chrysarobin. In the case of psoriasis of the face and scalp it really acted like a specific. The eruption, which was quite profuse, disappeared within five days. A ten per cent. ointment was applied twice daily. There was no other treatment

Another patient with a universal psoriasis of sixteen years' standing, who applied to my department at Mount Sinai Dispensary for some other trouble, was induced to use a ten per cent. salve of gallacetophenone for the forehead and scalp, which were thickly covered with psoriatic patches. When he returned, two weeks later, there was nothing left but a pigmentation of the forehead, while the psoriasis of the body which had not been treated was *in statu quo ante.*

My friend, DR. G.T. ELLIOT, has, at my request, used gallacetophenone on a patient with psoriasis of eight years' standing, distributed over the trunk, knees, elbows, scalp, and face in patches of various sizes. The case had been under treatment the whole time and had proved exceedingly rebellious. Arsenic caused an increase of inflammatory symptoms. Pyrogallic acid had been used with but moderate success Chysarobin did well, if used persistently. At the time (November 21st) when the use of a ten per cent. gallacetophenone ointment was begun, the patches were bright red, burning, and with abundant desquamation. A week later the patches were paler and breaking up into small papules. The centers had undergone involution and the desquamation was very little Under the further use the improvement continued. DR. ELLIOT concludes his report with the following words: "From this slight experience, gallacetophenone appears to me to promise to be the most satisfactory local remedy for psoriasis and superior to all others. It produces no inflammatory reaction or pigmentation, but seems to influence immediately the lesions."

From my experience, I feel justified in recommending gallacetophenone as an excellent remedy for psoriasis, for it acts in some cases more promptly than chrysarobin—in all the cases which I have treated, as well if not better than the other remedies at our disposal. As it is harmless and does not discolor the skin or hair, I hope it will be found to be one of the best local remedies for psoriasis of the body, face, and scalp.

My results in a number of cases of eczema psoriti-forme and seborrhoicum have been so gratifying and encouraging that I should like to include these affections in its field of usefulness.—*N. Y. Med. Jour.*

JULIA W. CARPENTER, M. D., (*Cinn. Lancet Clinic*), also speaks of the rapid, almost specific, action of GALLACETOPHENONE in a very rebellious case of psoriasis.

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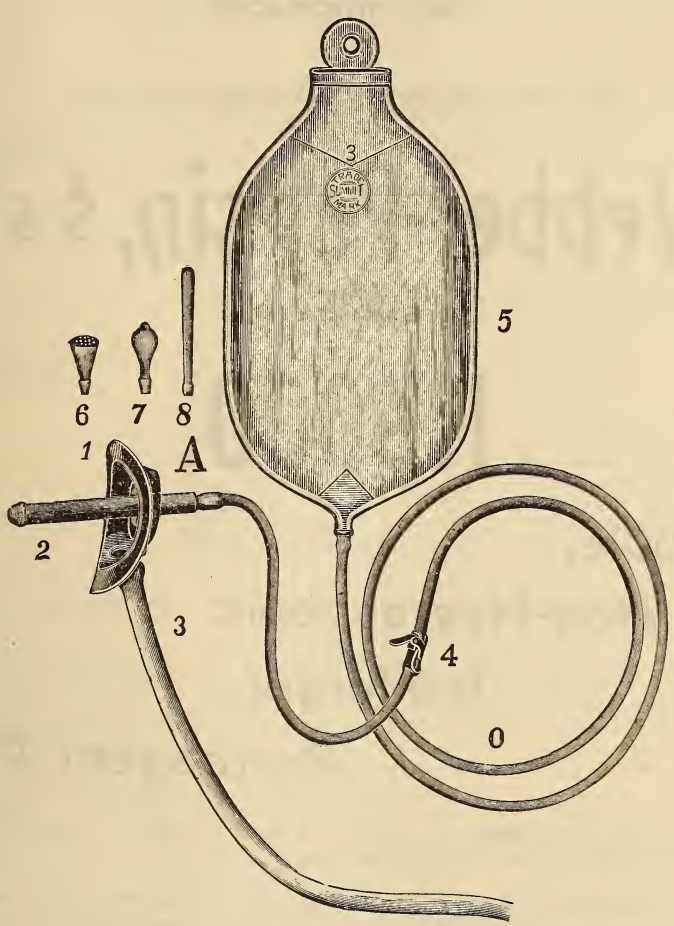

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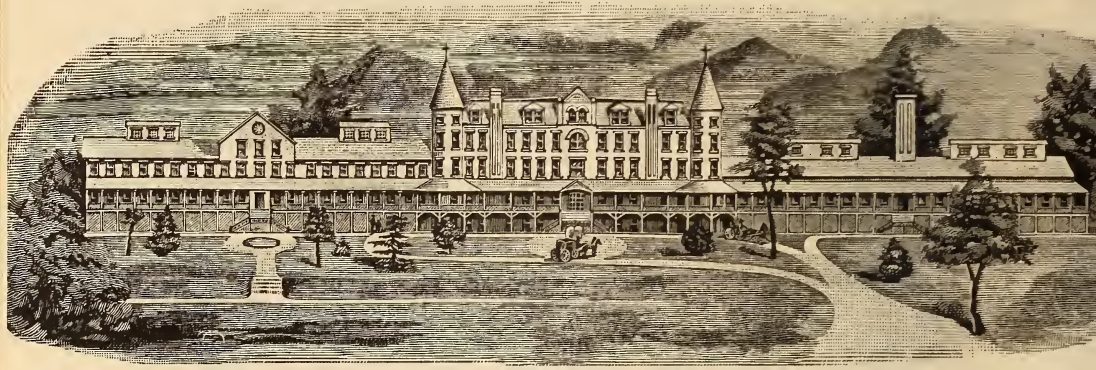

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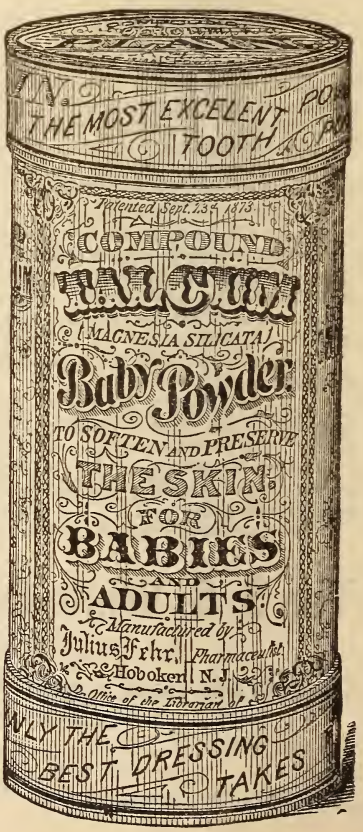

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GALLACETOPHENONE, A NEW DERMATO-THERAPEUTIC AGENT.

BY HERMANN GOLDENBERG, M. D.

It is well known that pyrogallic acid is by no means a harmless drug. After its introduction into dermatological practice NEISSER lost a patient after one application. The patient died on the third day with symptoms of intoxication. VIDAL has likewise reported the death of a patient, eighteen years old, who had used a ten per cent. pyrogallic ointment for two weeks. This poisonous effect of pyrogallic acid is to be attributed to the great readiness with which it is oxidized in alkaline solutions (being so intensely reducing).

Gallacetophenone does not possess this quality and is absolutely harmless, as has been proven by experiments on animals.

It displays strong antiseptic qualities. A one per cent. solution added to chopped meat prevented its becoming putrid for twenty-one days, and destroyed the *Streptococcus aureus* within twenty-four hours.

Since the middle of October I have employed it, both in private and in dispensary practice, on at least thirty patients suffering from various skin diseases.

On account of its resemblance to pyrogallic acid, it seemed to be indicated in psoriasis. I have been so much more inclined to use it in that disease, since VON REKOWSKI, who tried it in a few cases only, maintains "that the effect of this new preparation (used as a ten per cent. ointment) is noticed within twelve hours."

Altogether, I have thus employed it in twelve cases of psoriasis—in all of them with good results. Within a few days the patches became paler and thinner, the desquamation ceased or became less, and involution took place in the centers. Usually after the lapse of from ten to twelve days only a slight hyperæmia was left. Within from two to three weeks the patches disappeared entirely without leaving any pigmentation.

A ten per cent. ointment did not produce any marked irritation or discolor the skin. It stains the clothes slightly yellowish, much less than pyrogallic acid or chrysarobin. In the case of psoriasis of the face and scalp it really acted like a specific. The eruption, which was quite profuse, disappeared within five days. A ten per cent. ointment was applied twice daily. There was no other treatment.

Another patient with a universal psoriasis of sixteen years' standing, who applied to my department at Mount Sinai Dispensary for some other trouble, was induced to use a ten per cent. salve of gallacetophenone for the forehead and scalp, which were thickly covered with psoriatic patches. When he returned, two weeks later, there was nothing left but a pigmentation of the forehead, while the psoriasis of the body which had not been treated was *in statu quo ante.*

My friend, DR. G. T. ELLIOT, has, at my request, used gallacetophenone on a patient with psoriasis of eight years' standing, distributed over the trunk, knees, elbows, scalp, and face in patches of various sizes. The case had been under treatment the whole time and had proved exceedingly rebellious. Arsenic caused an increase of inflammatory symptoms. Pyrogallic acid had been used with but moderate success. Chrysarobin did well, if used persistently. At the time (November 21st) when the use of a ten per cent. gallacetophenone ointment was begun, the patches were bright red, burning, and with abundant desquamation. A week later the patches were paler and breaking up into small papules. The centers had undergone involution and the desquamation was very little. Under the further use the improvement continued. DR. ELLIOT concludes his report with the following words: "From this slight experience, gallacetophenone appears to me to promise to be the most satisfactory local remedy for psoriasis and superior to all others. It produces no inflammatory reaction or pigmentation, but seems to influence immediately the lesions."

From my experience, I feel justified in recommending gallacetophenone as an excellent remedy for psoriasis, for it acts in some cases more promptly than chrysarobin—in all the cases which I have treated, as well if not better than the other remedies at our disposal. As it is harmless and does not discolor the skin or hair, I hope it will be found to be one of the best local remedies for psoriasis of the body, face, and scalp.

My results in a number of cases of eczema psoriti-forme and seborrhoicum have been so gratifying and encouraging that I should like to include these affections in its field of usefulness.—*N. Y. Med. Jour.*

JULIA W. CARPENTER, M. D., (*Cinn. Lancet Clinic*), also speaks of the rapid, almost specific, action of GALLACETOPHENONE in a very rebellious case of psoriasis.

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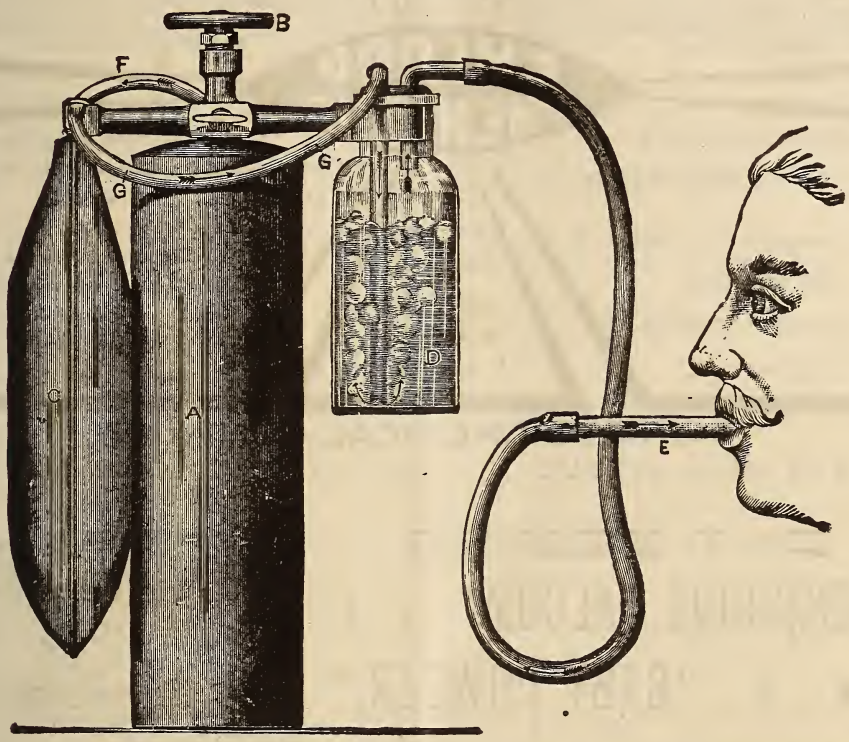

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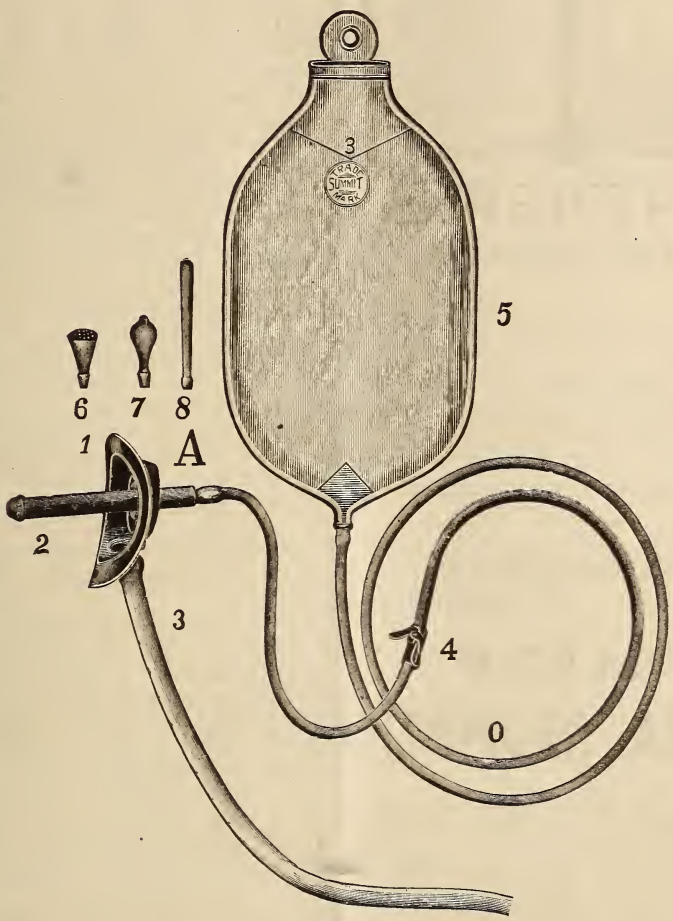

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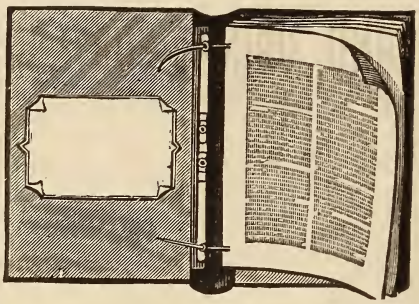

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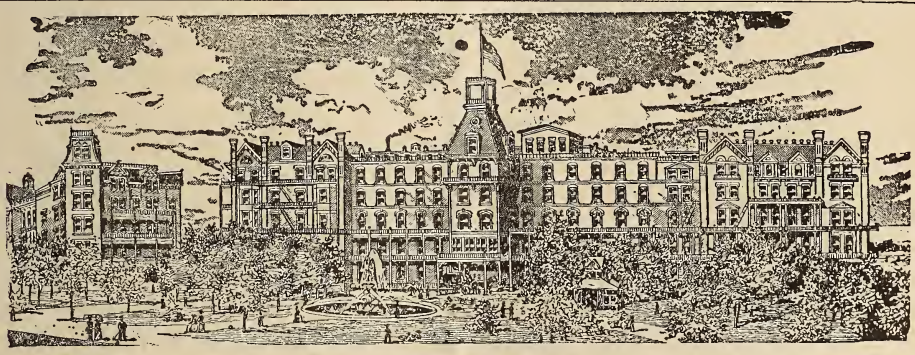

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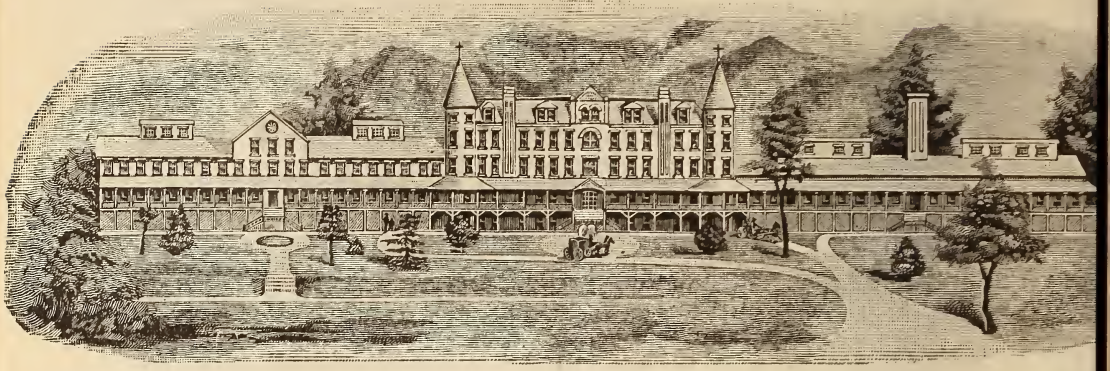

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It displays strong antiseptic qualities. A one per cent. solution added to chopped meat prevented its becoming putrid for twenty-one days, and destroyed the *Streptococcus aureus* within twenty-four hours.

Since the middle of October I have employed it, both in private and in dispensary practice, on at least thirty patients suffering from various skin diseases.

On account of its resemblance to pyrogallic acid, it seemed to be indicated in psoriasis. I have been so much more inclined to use it in that disease, since VON REKOWSKI, who tried it in a few cases only, maintains "that the effect of this new preparation (used as a ten per cent. ointment) is noticed within twelve hours."

Altogether, I have thus employed it in twelve cases of psoriasis—in all of them with good results. Within a few days the patches became paler and thinner, the desquamation ceased or became less, and involution took place in the centers. Usually after the lapse of from ten to twelve days only a slight hyperæmia was left. Within from two to three weeks the patches disappeared entirely without leaving any pigmentation.

A ten per cent. ointment did not produce any marked irritation or discolor the skin. It stains the clothes slightly yellowish, much less than pyrogallic acid or chrysarobin. In the case of psoriasis of the face and scalp it really acted like a specific. The eruption, which was quite profuse, disappeared within five days. A ten per cent. ointment was applied twice daily. There was no other treatment

Another patient with a universal psoriasis of sixteen years' standing, who applied to my department at Mount Sinai Dispensary for some other trouble, was induced to use a ten per cent. salve of gallacetophenone for the forehead and scalp, which were thickly covered with psoriatic patches. When he returned, two weeks later, there was nothing left but a pigmentation of the forehead, while the psoriasis of the body which had not been treated was *in statu quo ante.*

My friend, DR. G.T. ELLIOT, has, at my request, used gallacetophenone on a patient with psoriasis of eight years' standing, distributed over the trunk, knees, elbows, scalp, and face in patches of various sizes. The case had been under treatment the whole time and had proved exceedingly rebellious. Arsenic caused an increase of inflammatory symptoms. Pyrogallic acid had been used with but moderate success. Chysarobin did well, if used persistently. At the time (November 21st) when the use of a ten per cent. gallacetophenone ointment was begun, the patches were bright red, burning, and with abundant desquamation. A week later the patches were paler and breaking up into small papules. The centers had undergone involution and the desquamation was very little. Under the further use the improvement continued. DR. ELLIOT concludes his report with the following words: "From this slight experience, gallacetophenone appears to me to promise to be the most satisfactory local remedy for psoriasis and superior to all others. It produces no inflammatory reaction or pigmentation, but seems to influence immediately the lesions."

From my experience, I feel justified in recommending gallacetophenone as an excellent remedy for psoriasis, for it acts in some cases more promptly than chrysarobin—in all the cases which I have treated, as well if not better than the other remedies at our disposal. As it is harmless and does not discolor the skin or hair, I hope it will be found to be one of the best local remedies for psoriasis of the body, face, and scalp.

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Or, the person may not be able to think as quickly as he should. To test this, ask the patient three simple questions in rapid succession, as, Where were you just before you came into this room? What were you doing? How long did you remain? The rapidity with which the answers are given indicate the rapidity of brain action.

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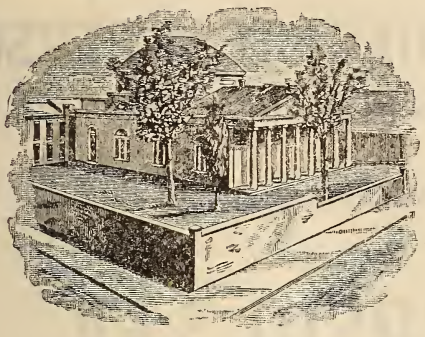

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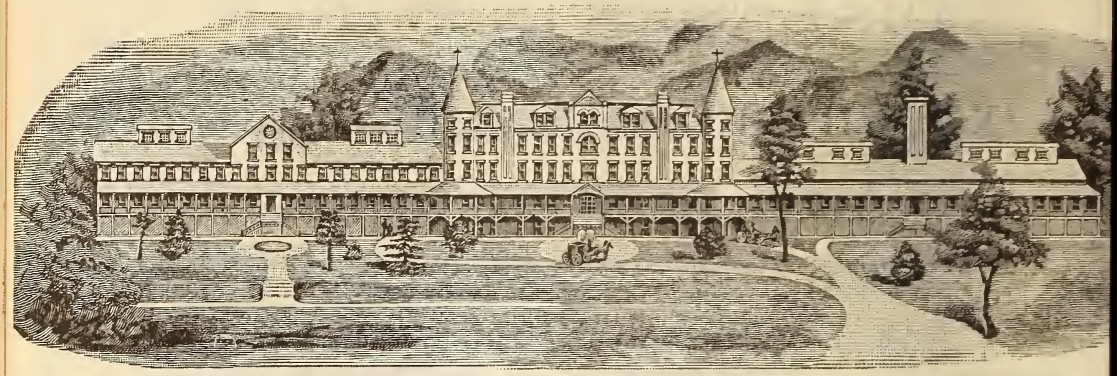

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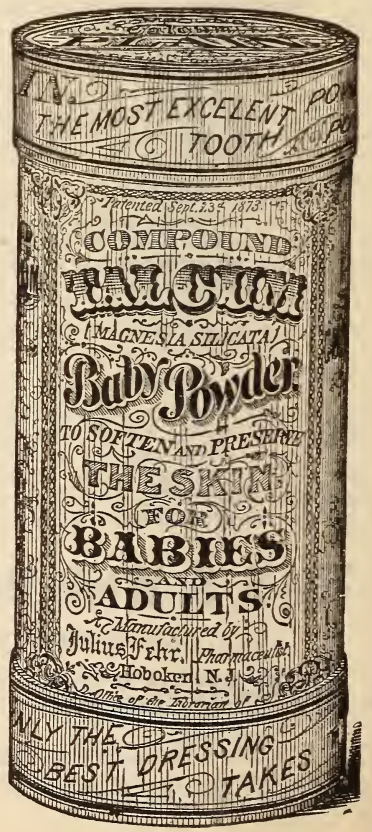

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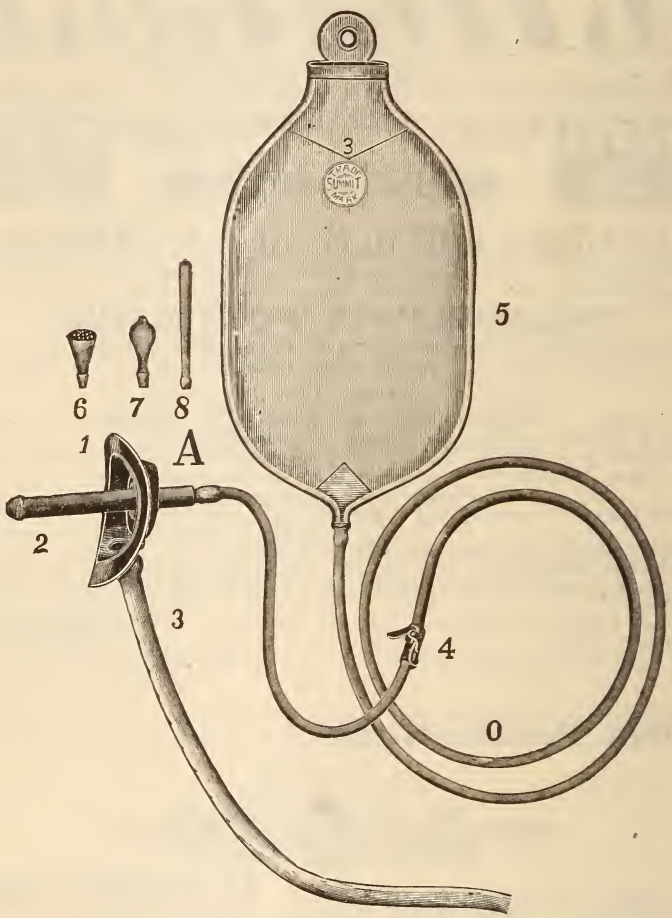

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"We know that phenic acid, from the point of view of its local action, presents certain analogies with cocaine; like the latter, it produces ischæmia and insensibility of the tissues. We would therefore expect that a combination of the two substances, under the form of phenate of cocaine, would have therapeutic properties, superior to those of the muriate of cocaine. This has been found to be the case by a Bavarian physician, DR. VON OEFELE, who has for some time past employed the phenate of cocaine exclusively in the place of the muriate."

He has found that the phenic salt exercises an analgesic action much more persistent than that of the muriate, while the chances of producing toxic effects are much less. Gluck was accustomed to add carbolic acid to his solutions of cocaine for the purpose of diminishing the chances of producing disagreeable results. These properties and advantages are explained by the fact that the phenic salt is almost entirely insoluble in water. Not being dissolved by the juices of the organism, the phenate of cocaine, employed as a local application, is absorbed but little or not at all, whence the absence of intoxication and the persistence of the analgesic action, which may last as long as thirty-six hours. Phenate of cocaine may be given internally as well as in hypodermic injection.—*La Semaine Med.*

GALLACETOPHENONE, A NEW DERMATO-THERAPEUTIC AGENT.

BY HERMANN GOLDENBERG, M. D.

It is well known that pyrogallic acid is by no means a harmless drug. After its introduction into dermatological practice NEISSER lost a patient after one application. The patient died on the third day with symptoms of intoxication. VIDAL has likewise reported the death of a patient eighteen years old, who had used a ten per cent. pyrogallic ointment for two weeks. This poisonous effect of pyrogallic acid is to be attributed to the great readiness with which it is oxidized in alkaline solutions (being so intensely reducing).

Gallacetophenone does not possess this quality and is absolutely harmless, as has been proven by experiments on animals.

It displays strong antiseptic qualities. A one per cent. solution added to chopped meat prevented its becoming putrid for twenty-one days, and destroyed the *Streptococcus aureus* within twenty-four hours.

Since the middle of October I have employed it, both in private and in dispensary practice, on at least thirty patients suffering from various skin diseases.

On account of its resemblance to pyrogallic acid, it seemed to be indicated in psoriasis. I have been so much more inclined to use it in that disease, since VON REKOWSKI, who tried it in a few cases only, maintains "that the effect of this new preparation (used as a ten per cent. ointment) is noticed within twelve hours."

Altogether, I have thus employed it in twelve cases of psoriasis—in all of them with good results. Within a few days the patches became paler and thinner, the desquamation ceased or became less, and involution took place in the centers. Usually after the lapse of from ten to twelve days only a slight hyperæmia was left. Within from two to three weeks the patches disappeared entirely without leaving any pigmentation.

A ten per cent. ointment did not produce any marked irritation or discolor the skin. It stains the clothes slightly yellowish, much less than pyrogallic acid or chrysarobin. In the case of psoriasis of the face and scalp it really acted like a specific. The eruption, which was quite profuse, disappeared within five days. A ten per cent. ointment was applied twice daily. There was no other treatment

Another patient with a universal psoriasis of sixteen years' standing, who applied to my department at Mount Sinai Dispensary for some other trouble, was induced to use a ten per cent. salve of gallacetophenone for the forehead and scalp, which were thickly covered with psoriatic patches. When he returned, two weeks later, there was nothing left but a pigmentat on of the forehead, while the psoriasis of the body which had not been treated was *in statu quo ante.*

My friend, DR. G.T. ELLIOT, has, at my request, used gallacetophenone on a patient with psoriasis of eight years' standing, distributed over the trunk, knees, elbows, scalp, and face in patches of various sizes. The case had been under treatment the whole time and had proved exceedingly rebellious. Arsenic caused an increase of inflammatory symptoms. Pyrogallic acid had been used with but moderate success. Chysarobin did well, if used persistently. At the time (November 21st) when the use of a ten per cent. gallacetophenone ointment was begun, the patches were bright red, burning, and with abundant desquamation. A week later the patches were paler and breaking up into small papules. The centers had undergone involution and the desquamation was very little Under the further use the improvement continued. DR. ELLIOT concludes his report with the following words: "From this slight experience, gallacetophenone appears to me to promise to be the most satisfactory local remedy for psoriasis and superior to all others. It produces no inflammatory reaction or pigmentation, but seems to influence immediately the lesions."

From my experience, I feel justified in recommending gallacetophenone as an excellent remedy for psoriasis, for it acts in some cases more promptly than chrysarobin—in all the cases which I have treated, as well if not better than the other remedies at our disposal. As it is harmless and does not discolor the skin or hair, I hope it will be found to be one of the best local remedies for psoriasis of the body, face, and scalp.

My results in a number of cases of eczema psoritiforme and seborrhoicum have been so gratifying and encouraging that I should like to include these affections in its field of usefulness.—*N. Y. Med. Jour.*

JULIA W. CARPENTER, M. D., (*Cinn. Lancet Clinic*), also speaks of the rapid, almost specific, action of GALLACETOPHENONE in a very rebellious case of psoriasis.

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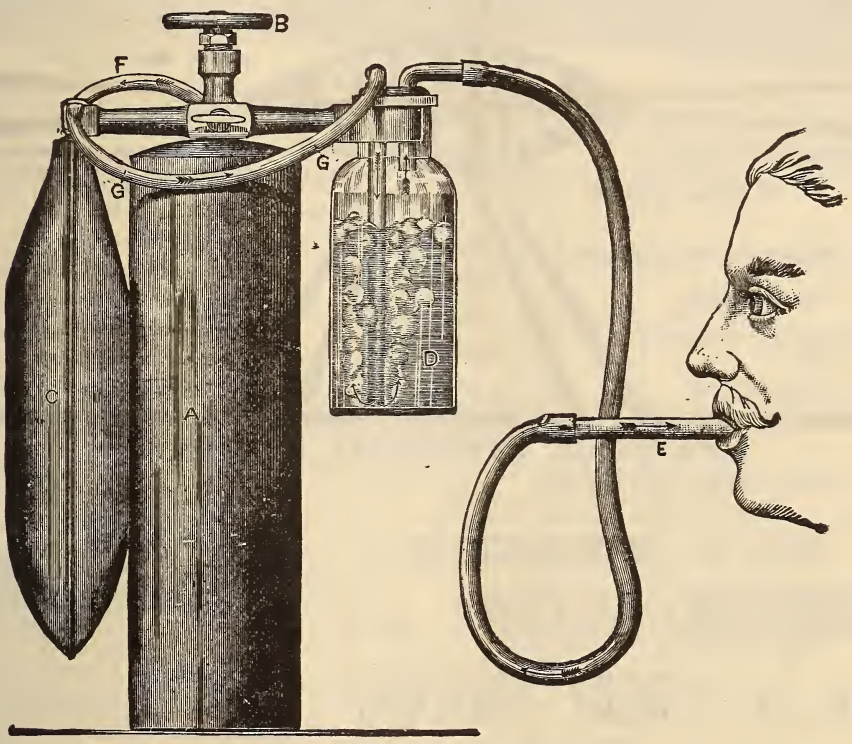

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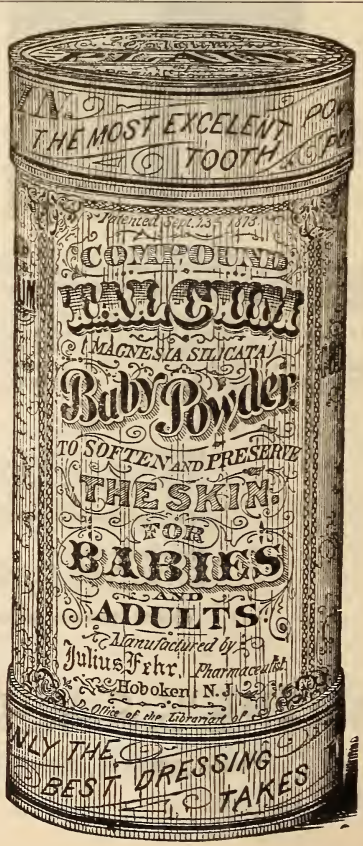

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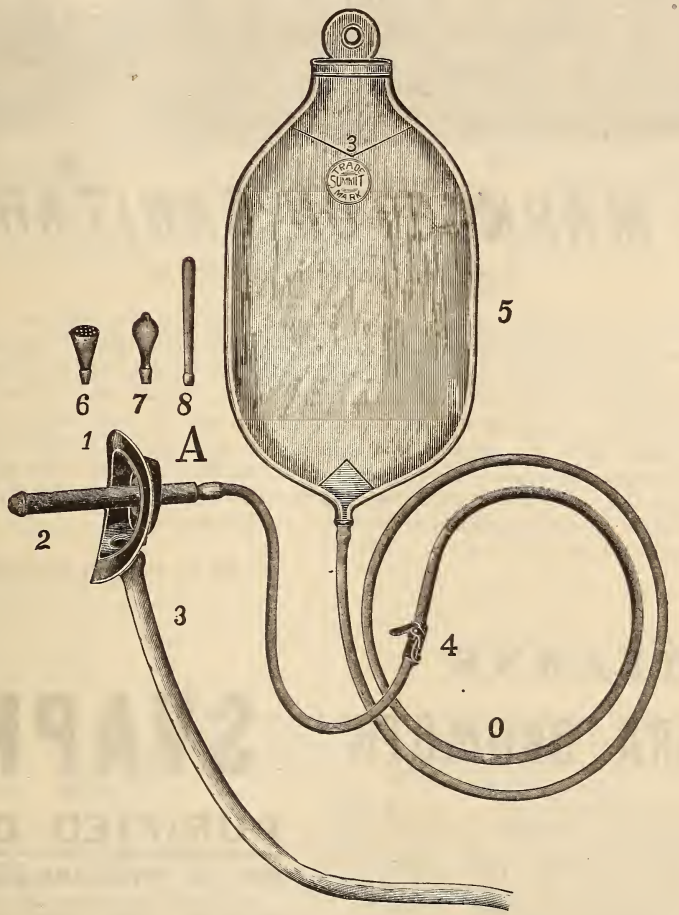

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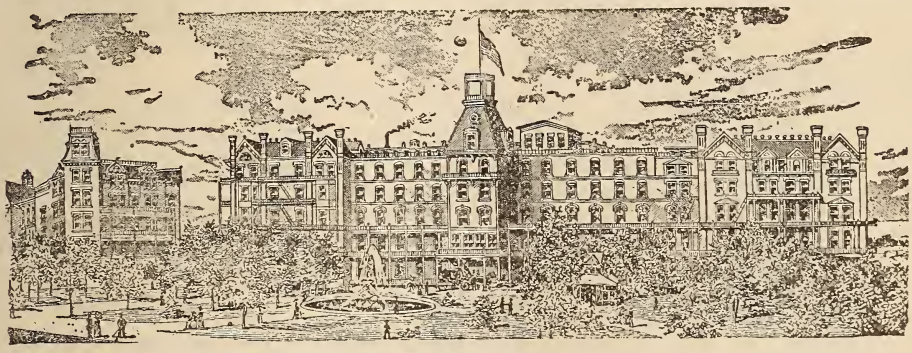

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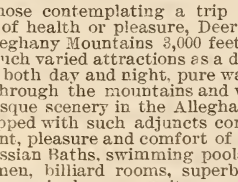

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He has found that the phenic salt exercises an analgesic action much more persistent than that of the muriate, while the chances of producing toxic effects are much less. Gluck was accustomed to add carbolic acid to his solutions of cocaine for the purpose of diminishing the chances of producing disagreeable results. These properties and advantages are explained by the fact that the phenic salt is almost entirely insoluble in water. Not being dissolved by the juices of the organism, the phenate of cocaine, employed as a local application, is absorbed but little or not at all, whence the absence of intoxication and the persistence of the analgesic action, which may last as long as thirty-six hours. Phenate of cocaine may be given internally as well as in hypodermic injection.—*La Semaine Med.*

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A NEW DERMATO-THERAPEUTIC AGENT.

BY HERMANN GOLDENBERG, M. D.

It is well known that pyrogallic acid is by no means a harmless drug. After its introduction into dermatological practice NEISSER lost a patient after one application. The patient died on the third day with symptoms of intoxication. VIDAL has likewise reported the death of a patient, eighteen years old, who had used a ten per cent. pyrogallic ointment for two weeks. This poisonous effect of pyrogallic acid is to be attributed to the great readiness with which it is oxidized in alkaline solutions (being so intensely reducing).

Gallacetophenone does not possess this quality and is absolutely harmless, as has been proven by experiments on animals.

It displays strong antiseptic qualities. A one per cent. solution added to chopped meat prevented its becoming putrid for twenty-one days, and destroyed the *Streptococcus aureus* within twenty-four hours.

Since the middle of October I have employed it, both in private and in dispensary practice, on at least thirty patients suffering from various skin diseases.

On account of its resemblance to pyrogallic acid, it seemed to be indicated in psoriasis. I have been so much more inclined to use it in that disease, since VON REKOWSKI, who tried it in a few cases only, maintains "that the effect of this new preparation (used as a ten per cent. ointment) is noticed within twelve hours."

Altogether, I have thus employed it in twelve cases of psoriasis—in all of them with good results. Within a few days the patches became paler and thinner, the desquamation ceased or became less, and involution took place in the centers. Usually after the lapse of from ten to twelve days only a slight hyperæmia was left. Within from two to three weeks the patches disappeared entirely without leaving any pigmentation.

A ten per cent. ointment did not produce any marked irritation or discolor the skin. It stains the clothes slightly yellowish, much less than pyrogallic acid or chrysarobin. In the case of psoriasis of the face and scalp it really acted like a specific. The eruption, which was quite profuse, disappeared within five days, A ten per cent. ointment was applied twice daily. There was no other treatment

Another patient with a universal psoriasis of sixteen years' standing, who applied to my department at Mount Sinai Dispensary for some other trouble, was induced to use a ten per cent. salve of gallacetophenone for the forehead and scalp, which were thickly covered with psoriatic patches. When he returned, two weeks later, there was nothing left but a pigmentat on of the forehead, while the psoriasis of the body which had not been treated was *in statu quo ante.*

My friend, DR. G.T. ELLIOT, has, at my request, used gallacetophenone on a patient with psoriasis of eight years' standing, distributed over the trunk, knees, elbows, scalp, and face in patches of various sizes. The case had been under treatment the whole time and had proved exceedingly rebellious. Arsenic caused an increase of inflammatory symptoms. Pyrogallic acid had been used with but moderate success. Chysarobin did well, if used persistently. At the time (November 21st) when the use of a ten per cent. gallacetophenone ointment was begun, the patches were bright red, burning, and with abundant desquamation. A week later the patches were paler and breaking up into small papules. The centers had undergone involution and the desquamation was very little Under the further use the improvement continued. DR. ELLIOT concludes his report with the following words: "From this slight experience, gallacetophenone appears to me to promise to be the most satisfactory local remedy for psoriasis and superior to all others. It produces no inflammatory reaction or pigmentation, but seems to influence immediately the lesions."

From my experience, I feel justified in recommending gallacetophenone as an excellent remedy for psoriasis, for it acts in some cases more promptly than chrysarobin—in all the cases which I have treated, as well if not better than the other remedies at our disposal. As it is harmless and does not discolor the skin or hair, I hope it will be found to be one of the best local remedies for psoriasis of the body, face, and scalp.

My results in a number of cases of eczema psoritiforme and seborrhoicum have been so gratifying and encouraging that I should like to include these affections in its field of usefulness.—*N. Y. Med. Jour.*

JULIA W. CARPENTER, M. D., (*Cinn. Lancet Clinic*), also speaks of the rapid, almost specific, action of GALLACETOPHENONE in a very rebellious case of psoriasis.

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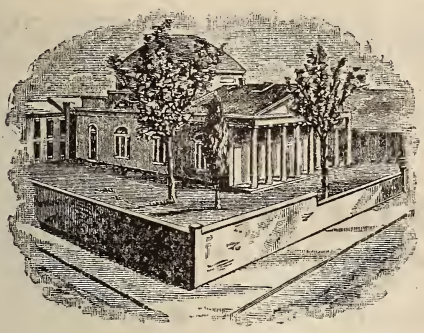

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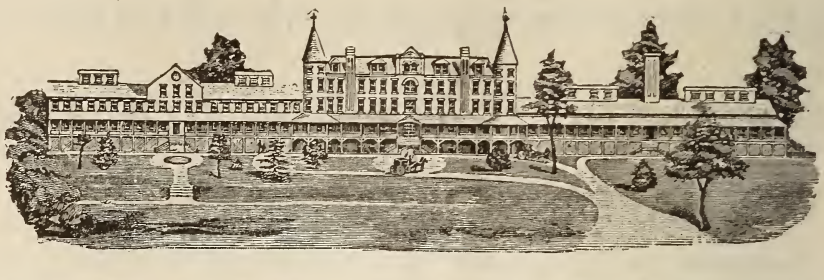

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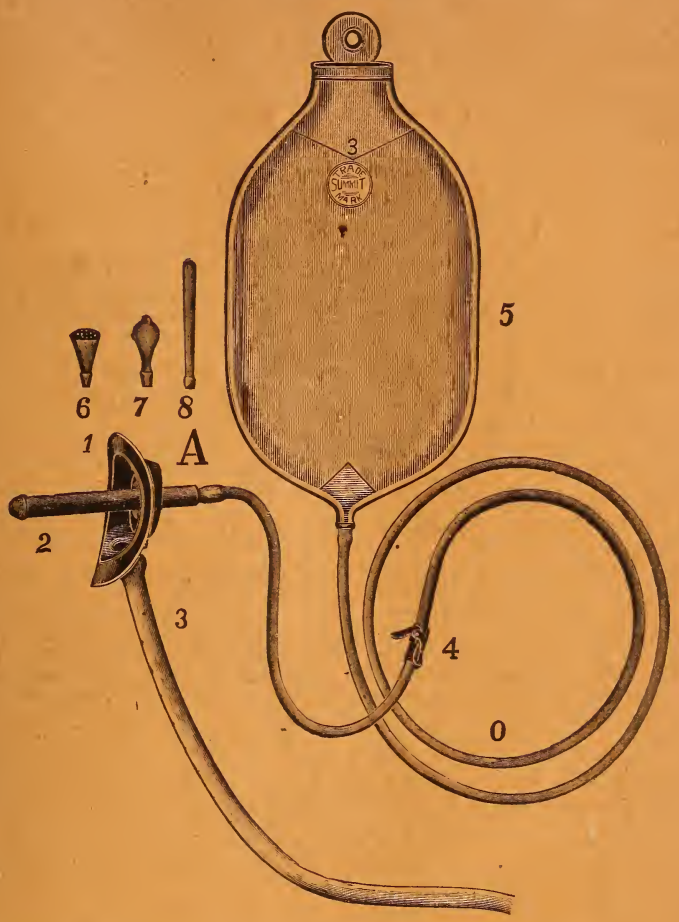

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GALLACETOPHENONE

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THE PHENATE OF COCAINE.

Prof. v. Nussbaum.

"We know that phenic acid, from the point of view of its local action, presents certain analogies with cocaine; like the latter, it produces ischæmia and insensibility of the tissues. We would therefore expect that a combination of the two substances, under the form of phenate of cocaine, would have therapeutic properties, superior to those of the muriate of cocaine. This has been found to be the case by a Bavarian physician, DR. VON OEFELE, who has for some time past employed the phenate of cocaine exclusively in the place of the muriate."

He has found that the phenic salt exercises an analgesic action much more persistent than that of the muriate, while the chances of producing toxic effects are much less. Gluck was accustomed to add carbolic acid to his solutions of cocaine for the purpose of diminishing the chances of producing disagreeable results. These properties and advantages are explained by the fact that the phenic salt is almost entirely insoluble in water. Not being dissolved by the juices of the organism, the phenate of cocaine, employed as a local application, is absorbed but little or not at all, whence the absence of intoxication and the persistence of the analgesic action, which may last as long as thirty-six hours. Phenate of cocaine may be given internally as well as in hypodermic injection.—*La Semaine Med.*

GALLACETOPHENONE,

A NEW DERMATO-THERAPEUTIC AGENT.

BY HERMANN GOLDENBERG, M. D.

It is well known that pyrogallic acid is by no means a harmless drug. After its introduction into dermatological practice NEISSER lost a patient after one application. The patient died on the third day with symptoms of intoxication. VIDAL has likewise reported the death of a patient, eighteen years old, who had used a ten per cent. pyrogallic ointment for two weeks. This poisonous effect of pyrogallic acid is to be attributed to the great readiness with which it is oxidized in alkaline solutions (being so intensely reducing).

Gallacetophenone does not possess this quality and is absolutely harmless, as has been proven by experiments on animals.

It displays strong antiseptic qualities. A one per cent. solution added to chopped meat prevented its becoming putrid for twenty-one days, and destroyed the *Streptococcus aureus* within twenty-four hours.

Since the middle of October I have employed it, both in private and in dispensary practice, on at least thirty patients suffering from various skin diseases.

On account of its resemblance to pyrogallic acid, it seemed to be indicated in psoriasis. I have been so much more inclined to use it in that disease, since VON REKOWSKI, who tried it in a few cases only, maintains "that the effect of this new preparation (used as a ten per cent. ointment) is noticed within twelve hours."

Altogether, I have thus employed it in twelve cases of psoriasis—in all of them with good results. Within a few days the patches became paler and thinner, the desquamation ceased or became less, and involution took place in the centers. Usually after the lapse of from ten to twelve days only a slight hyperæmia was left. Within from two to three weeks the patches disappeared entirely without leaving any pigmentation.

A ten per cent. ointment did not produce any marked irritation or discolor the skin. It stains the clothes slightly yellowish, much less than pyrogallic acid or chrysarobin. In the case of psoriasis of the face and scalp it really acted like a specific. The eruption, which was quite profuse, disappeared within five days. A ten per cent. ointment was applied twice daily. There was no other treatment

Another patient with a universal psoriasis of sixteen years' standing, who applied to my department at Mount Sinai Dispensary for some other trouble, was induced to use a ten per cent. salve of gallacetophenone for the forehead and scalp, which were thickly covered with psoriatic patches. When he returned, two weeks later, there was nothing left but a pigmentation of the forehead, while the psoriasis of the body which had not been treated was *in statu quo ante.*

My friend, DR. G.T. ELLIOT, has, at my request, used gallacetophenone on a patient with psoriasis of eight years' standing, distributed over the trunk, knees, elbows, scalp, and face in patches of various sizes. The case had been under treatment the whole time and had proved exceedingly rebellious. Arsenic caused an increase of inflammatory symptoms. Pyrogallic acid had been used with but moderate success. Chysarobin did well, if used persistently. At the time (November 21st) when the use of a ten per cent. gallacetophenone ointment was begun, the patches were bright red, burning, and with abundant desquamation. A week later the patches were paler and breaking up into small papules. The centers had undergone involution and the desquamation was very little. Under the further use the improvement continued. DR. ELLIOT concludes his report with the following words: "From this slight experience, gallacetophenone appears to me to promise to be the most satisfactory local remedy for psoriasis and superior to all others. It produces no inflammatory reaction or pigmentation, but seems to influence immediately the lesions."

From my experience, I feel justified in recommending gallacetophenone as an excellent remedy for psoriasis, for it acts in some cases more promptly than chrysarobin—in all the cases which I have treated, as well if not better than the other remedies at our disposal. As it is harmless and does not discolor the skin or hair, I hope it will be found to be one of the best local remedies for psoriasis of the body, face, and scalp.

My results in a number of cases of eczema psoriti-forme and seborrhoicum have been so gratifying and encouraging that I should like to include these affections in its field of usefulness.—*N. Y. Med. Jour.*

JULIA W. CARPENTER, M. D., (*Cinn. Lancet Clinic*), also speaks of the rapid, almost specific, action of GALLACETOPHENONE in a very rebellious case of psoriasis.

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The Diurnules are put up in bottles of 100 and 500, and the Diurnal Tablet Triturates in bottles of 100, 500, and 1000. In addition to these a leather pocket case of the Diurnules, containing ten vials, will be furnished for the convenience of physicians.

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Druggists will find it to their interest to dispense this product because of its *ease of manipulation,* its great digestive power, its permanency, *its perfect solubility,* and its *reasonable price,* the latter being less—considering the digestive power and purity—than that of any other Pepsin on the market. We invite critical comparative tests with other high grade Pepsins.

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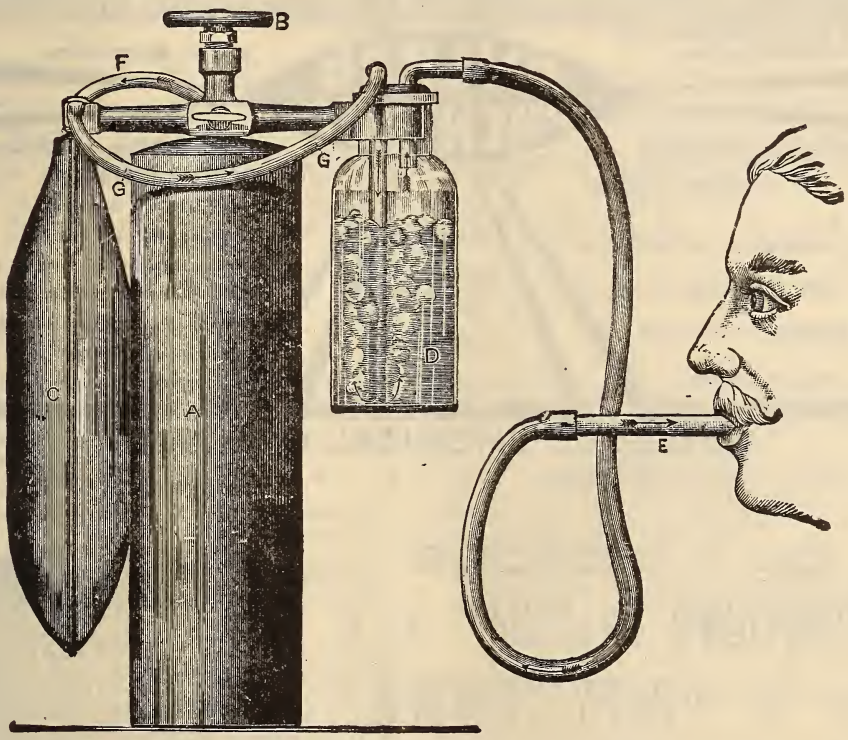

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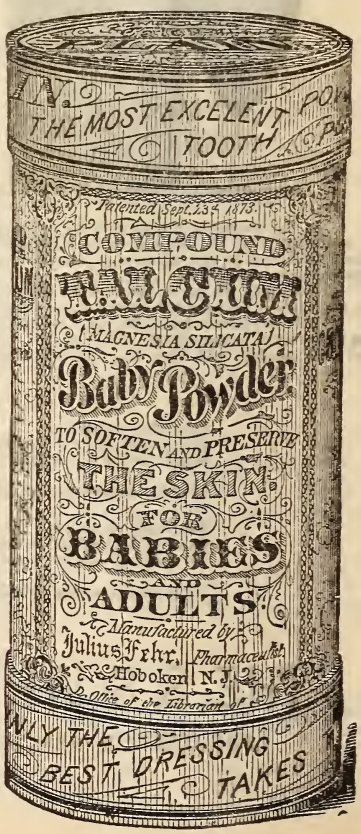

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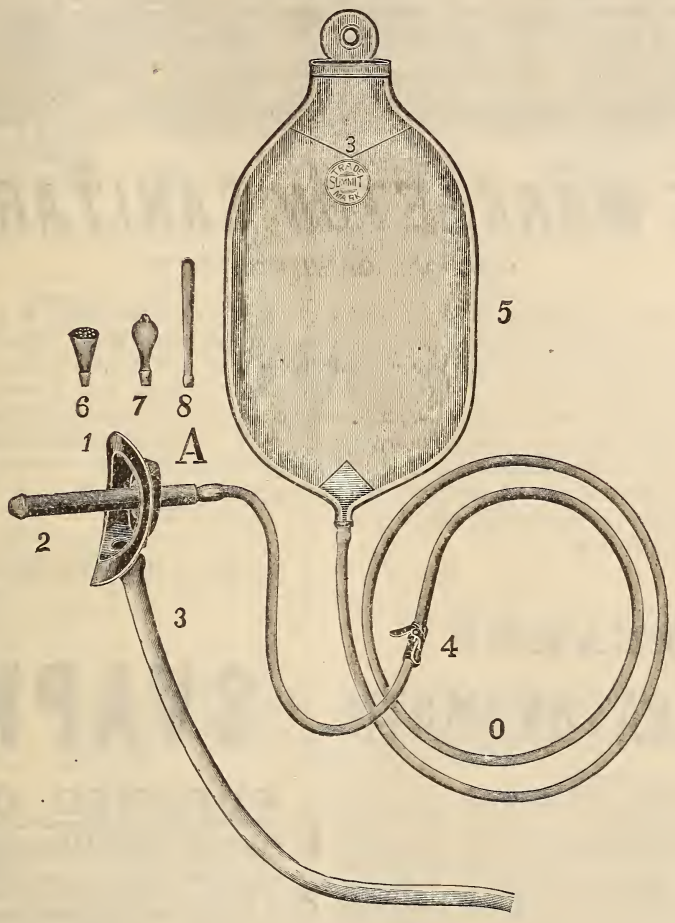

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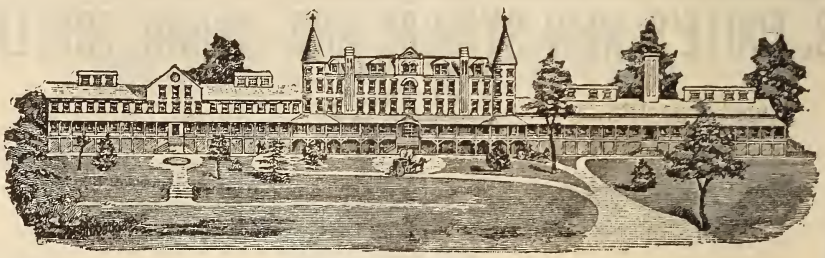

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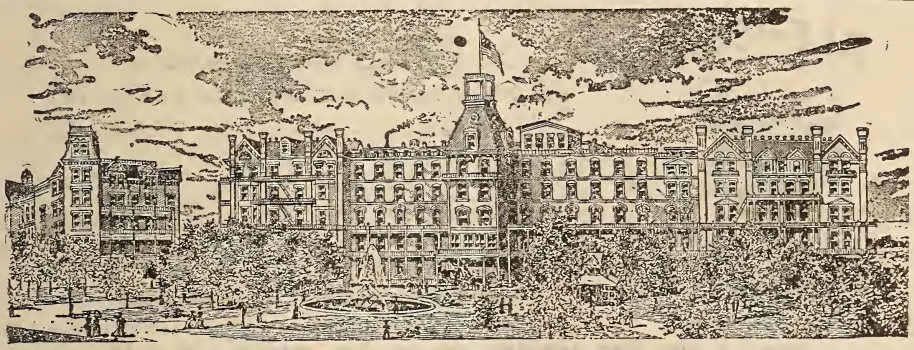

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He has found that the phenic salt exercises an analgesic action much more persistent than that of the muriate, while the chances of producing toxic effects are much less. Gluck was accustomed to add carbolic acid to his solutions of cocaine for the purpose of diminishing the chances of producing disagreeable results. These properties and advantages are explained by the fact that the phenic salt is almost entirely insoluble in water. Not being dissolved by the juices of the organism, the phenate of cocaine, employed as a local application, is absorbed but little or not at all, whence the absence of intoxication and the persistence of the analgesic action, which may last as long as thirty-six hours. Phenate of cocaine may be given internally as well as in hypodermic injection.—*La Semaine Med.*

GALLACETOPHENONE, A NEW DERMATO-THERAPEUTIC AGENT.

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It is well known that pyrogallic acid is by no means a harmless drug. After its introduction into dermatological practice NEISSER lost a patient after one application. The patient died on the third day with symptoms of intoxication. VIDAL has likewise reported the death of a patient, eighteen years old, who had used a ten per cent. pyrogallic ointment for two weeks. This poisonous effect of pyrogallic acid is to be attributed to the great readiness with which it is oxidized in alkaline solutions (being so intensely reducing).

Gallacetophenone does not possess this quality and is absolutely harmless, as has been proven by experiments on animals.

It displays strong antiseptic qualities. A one per cent. solution added to chopped meat prevented its becoming putrid for twenty-one days, and destroyed the *Streptococcus aureus* within twenty-four hours.

Since the middle of October I have employed it, both in private and in dispensary practice, on at least thirty patients suffering from various skin diseases.

On account of its resemblance to pyrogallic acid, it seemed to be indicated in psoriasis. I have been so much more inclined to use it in that disease, since VON REKOWSKI, who tried it in a few cases only, maintains "that the effect of this new preparation (used as a ten per cent. ointment) is noticed within twelve hours."

Altogether, I have thus employed it in twelve cases of psoriasis—in all of them with good results. Within a few days the patches became paler and thinner, the desquamation ceased or became less, and involution took place in the centers. Usually after the lapse of from ten to twelve days only a slight hyperæmia was left. Within from two to three weeks the patches disappeared entirely without leaving any pigmentation.

A ten per cent. ointment did not produce any marked irritation or discolor the skin. It stains the clothes slightly yellowish, much less than pyrogallic acid or chrysarobin. In the case of psoriasis of the face and scalp it really acted like a specific. The eruption, which was quite profuse, disappeared within five days. A ten per cent. ointment was applied twice daily. There was no other treatment

Another patient with a universal psoriasis of sixteen years' standing, who applied to my department at Mount Sinai Dispensary for some other trouble, was induced to use a ten per cent. salve of gallacetophenone for the forehead and scalp, which were thickly covered with psoriatic patches. When he returned, two weeks later, there was nothing left but a pigmentation of the forehead, while the psoriasis of the body which had not been treated was *in statu quo ante.*

My friend, DR. G.T. ELLIOT, has, at my request, used gallacetophenone on a patient with psoriasis of eight years' standing, distributed over the trunk, knees, elbows, scalp, and face in patches of various sizes. The case had been under treatment the whole time and had proved exceedingly rebellious. Arsenic caused an increase of inflammatory symptoms. Pyrogallic acid had been used with but moderate success. Chysarobin did well, if used persistently. At the time (November 21st) when the use of a ten per cent. gallacetophenone ointment was begun, the patches were bright red, burning, and with abundant desquamation. A week later the patches were paler and breaking up into small papules. The centers had undergone involution and the desquamation was very little. Under the further use the improvement continued. DR. ELLIOT concludes his report with the following words: "From this slight experience, gallacetophenone appears to me to promise to be the most satisfactory local remedy for psoriasis and superior to all others. It produces no inflammatory reaction or pigmentation, but seems to influence immediately the lesions."

From my experience, I feel justified in recommending gallacetophenone as an excellent remedy for psoriasis, for it acts in some cases more promptly than chrysarobin—in all the cases which I have treated, as well if not better than the other remedies at our disposal. As it is harmless and does not discolor the skin or hair, I hope it will be found to be one of the best local remedies for psoriasis of the body, face, and scalp.

My results in a number of cases of eczema psoriti-forme and seborrhoicum have been so gratifying and encouraging that I should like to include these affections in its field of usefulness.—*N. Y. Med. Jour.*

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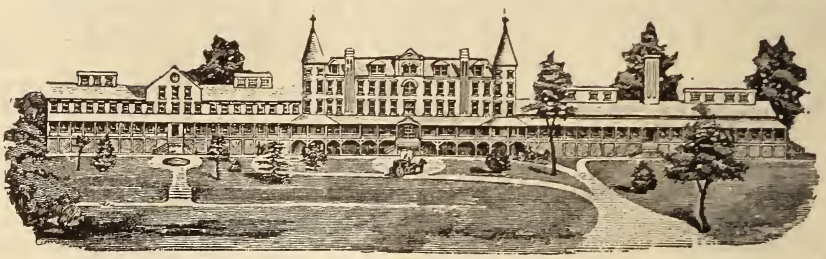

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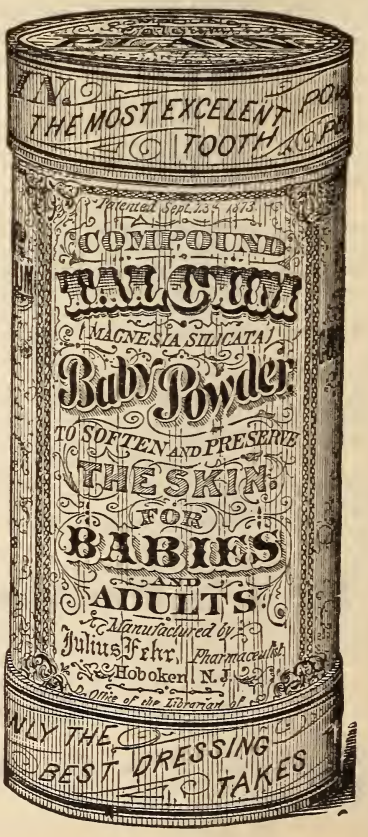

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He has found that the phenic salt exercises an analgesic action much more persistent than that of the muriate, while the chances of producing toxic effects are much less. Gluck was accustomed to add carbolic acid to his solutions of cocaine for the purpose of diminishing the chances of producing disagreeable results. These properties and advantages are explained by the fact that the phenic salt is almost entirely insoluble in water. Not being dissolved by the juices of the organism, the phenate of cocaine, employed as a local application, is absorbed but little or not at all, whence the absence of intoxication and the persistence of the analgesic action, which may last as long as thirty-six hours. Phenate of cocaine may be given internally as well as in hypodermic injection.—*La Semaine Med.*

GALLACETOPHENONE, A NEW DERMATO-THERAPEUTIC AGENT.

BY HERMANN GOLDENBERG, M. D.

It is well known that pyrogallic acid is by no means a harmless drug. After its introduction into dermatological practice NEISSER lost a patient after one application. The patient died on the third day with symptoms of intoxication. VIDAL has likewise reported the death of a patient, eighteen years old, who had used a ten per cent. pyrogallic ointment for two weeks. This poisonous effect of pyrogallic acid is to be attributed to the great readiness with which it is oxidized in alkaline solutions (being so intensely reducing).

Gallacetophenone does not possess this quality and is absolutely harmless, as has been proven by experiments on animals.

It displays strong antiseptic qualities. A one per cent. solution added to chopped meat prevented its becoming putrid for twenty-one days, and destroyed the *Streptococcus aureus* within twenty-four hours.

Since the middle of October I have employed it, both in private and in dispensary practice, on at least thirty patients suffering from various skin diseases.

On account of its resemblance to pyrogallic acid, it seemed to be indicated in psoriasis. I have been so much more inclined to use it in that disease, since VON REKOWSKI, who tried it in a few cases only, maintains "that the effect of this new preparation (used as a ten per cent. ointment) is noticed within twelve hours."

Altogether, I have thus employed it in twelve cases of psoriasis—in all of them with good results. Within a few days the patches became paler and thinner, the desquamation ceased or became less, and involution took place in the centers. Usually after the lapse of from ten to twelve days only a slight hyperæmia was left. Within from two to three weeks the patches disappeared entirely without leaving any pigmentation.

A ten per cent. ointment did not produce any marked irritation or discolor the skin. It stains the clothes slightly yellowish, much less than pyrogallic acid or chrysarobin. In the case of psoriasis of the face and scalp it really acted like a specific. The eruption, which was quite profuse, disappeared within five days. A ten per cent. ointment was applied twice daily. There was no other treatment

Another patient with a universal psoriasis of sixteen years' standing, who applied to my department at Mount Sinai Dispensary for some other trouble, was induced to use a ten per cent. salve of gallacetophenone for the forehead and scalp, which were thickly covered with psoriatic patches. When he returned, two weeks later, there was nothing left but a pigmentation of the forehead, while the psoriasis of the body which had not been treated was *in statu quo ante.*

My friend, DR. G.T. ELLIOT, has, at my request, used gallacetophenone on a patient with psoriasis of eight years' standing, distributed over the trunk, knees, elbows, scalp, and face in patches of various sizes. The case had been under treatment the whole time and had proved exceedingly rebellious. Arsenic caused an increase of inflammatory symptoms. Pyrogallic acid had been used with but moderate success. Chrysarobin did well, if used persistently. At the time (November 21st) when the use of a ten per cent. gallacetophenone ointment was begun, the patches were bright red, burning, and with abundant desquamation. A week later the patches were paler and breaking up into small papules. The centers had undergone involution and the desquamation was very little. Under the further use the improvement continued. DR. ELLIOT concludes his report with the following words: "From this slight experience, gallacetophenone appears to me to promise to be the most satisfactory local remedy for psoriasis and superior to all others. It produces no inflammatory reaction or pigmentation, but seems to influence immediately the lesions."

From my experience, I feel justified in recommending gallacetophenone as an excellent remedy for psoriasis, for it acts in some cases more promptly than chrysarobin—in all the cases which I have treated, as well if not better than the other remedies at our disposal. As it is harmless and does not discolor the skin or hair, I hope it will be found to be one of the best local remedies for psoriasis of the body, face, and scalp.

My results in a number of cases of eczema psoriti-forme and seborrhoicum have been so gratifying and encouraging that I should like to include these affections in its field of usefulness.—*N. Y. Med. Jour.*

JULIA W. CARPENTER, M. D., (*Cinn. Lancet Clinic*), also speaks of the rapid, almost specific, action of GALLACETOPHENONE in a very rebellious case of psoriasis.

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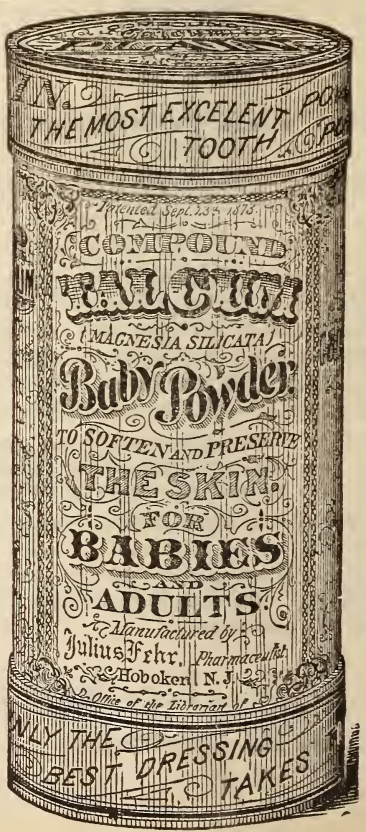

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Work has already begun east of Pittsburgh to meet improvements making west of Pittsburgh. These improvements will consist of additional second and third tracks, a general correction of the alignment, and completion of the double track on the Metropolitan Branch.

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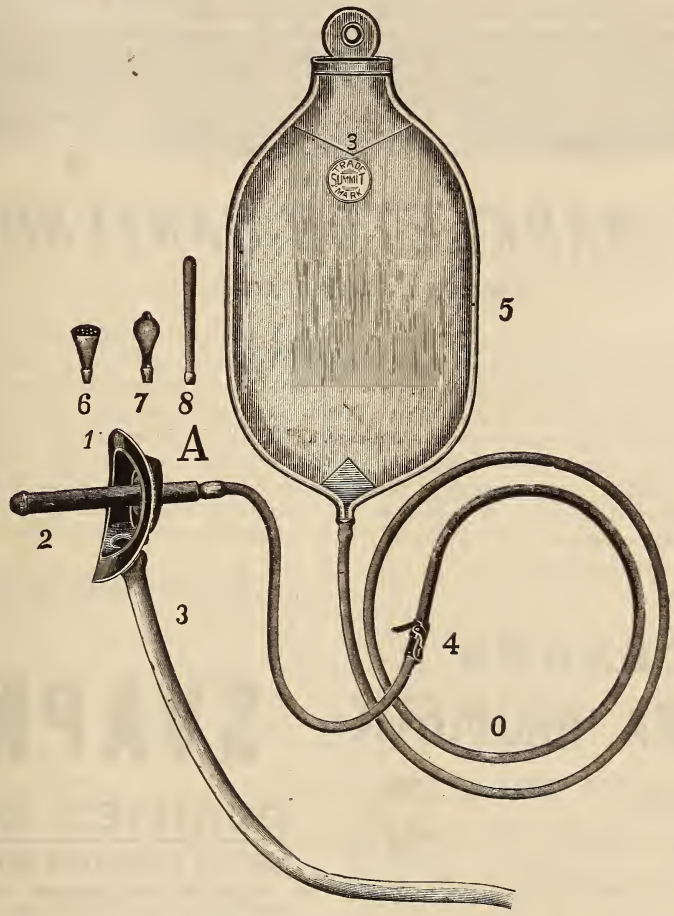

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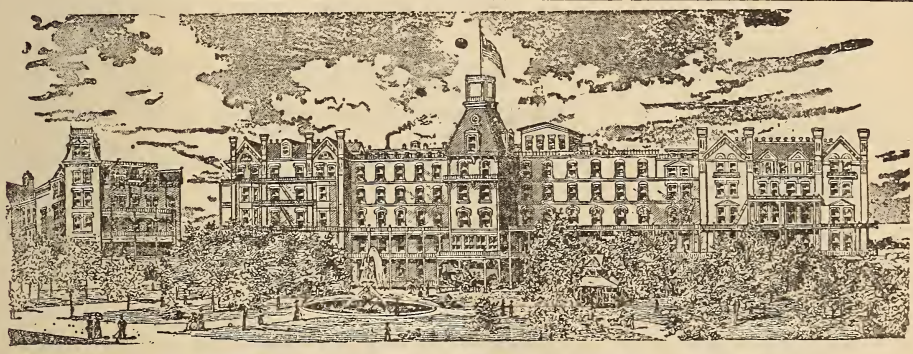

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BY HERMANN GOLDENBERG, M. D.

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Gallacetophenone does not possess this quality and is absolutely harmless, as has been proven by experiments on animals.

It displays strong antiseptic qualities. A one per cent. solution added to chopped meat prevented its becoming putrid for twenty-one days, and destroyed the *Streptococcus aureus* within twenty-four hours.

Since the middle of October I have employed it, both in private and in dispensary practice, on at least thirty patients suffering from various skin diseases.

On account of its resemblance to pyrogallic acid, it seemed to be indicated in psoriasis. I have been so much more inclined to use it in that disease, since VON REKOWSKI, who tried it in a few cases only, maintains "that the effect of this new preparation (used as a ten per cent. ointment) is noticed within twelve hours."

Altogether, I have thus employed it in twelve cases of psoriasis—in all of them with good results. Within a few days the patches became paler and thinner, the desquamation ceased or became less, and involution took place in the centers. Usually after the lapse of from ten to twelve days only a slight hyperæmia was left. Within from two to three weeks the patches disappeared entirely without leaving any pigmentation.

A ten per cent. ointment did not produce any marked irritation or discolor the skin. It stains the clothes slightly yellowish, much less than pyrogallic acid or chrysarobin. In the case of psoriasis of the face and scalp it really acted like a specific. The eruption, which was quite profuse, disappeared within five days. A ten per cent. ointment was applied twice daily. There was no other treatment

Another patient with a universal psoriasis of sixteen years' standing, who applied to my department at Mount Sinai Dispensary for some other trouble, was induced to use a ten per cent. salve of gallacetophenone for the forehead and scalp, which were thickly covered with psoriatic patches. When he returned, two weeks later, there was nothing left but a pigmentation of the forehead, while the psoriasis of the body which had not been treated was *in statu quo ante.*

My friend, DR. G.T. ELLIOT, has, at my request, used gallacetophenone on a patient with psoriasis of eight years' standing, distributed over the trunk, knees, elbows, scalp, and face in patches of various sizes. The case had been under treatment the whole time and had proved exceedingly rebellious. Arsenic caused an increase of inflammatory symptoms. Pyrogallic acid had been used with but moderate success. Chysarobin did well, if used persistently. At the time (November 21st) when the use of a ten per cent. gallacetophenone ointment was begun, the patches were bright red, burning, and with abundant desquamation. A week later the patches were paler and breaking up into small papules. The centers had undergone involution and the desquamation was very little Under the further use the improvement continued. DR. ELLIOT concludes his report with the following words: "From this slight experience, gallacetophenone appears to me to promise to be the most satisfactory local remedy for psoriasis and superior to all others. It produces no inflammatory reaction or pigmentation, but seems to influence immediately the lesions."

From my experience, I feel justified in recommending gallacetophenone as an excellent remedy for psoriasis, for it acts in some cases more promptly than chrysarobin—in all the cases which I have treated, as well if not better than the other remedies at our disposal. As it is harmless and does not discolor the skin or hair, I hope it will be found to be one of the best local remedies for psoriasis of the body, face, and scalp.

My results in a number of cases of eczema psoritiforme and seborrhoicum have been so gratifying and encouraging that I should like to include these affections in its field of usefulness.—*N. Y. Med. Jour.*

JULIA W. CARPENTER, M. D., (*Cinn. Lancet Clinic*), also speaks of the rapid, almost specific, action of GALLACETOPHENONE in a very rebellious case of psoriasis.

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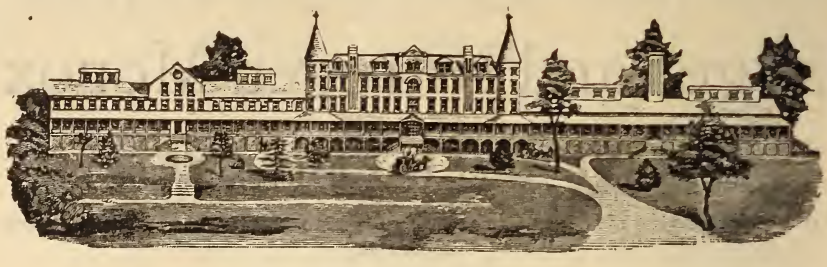

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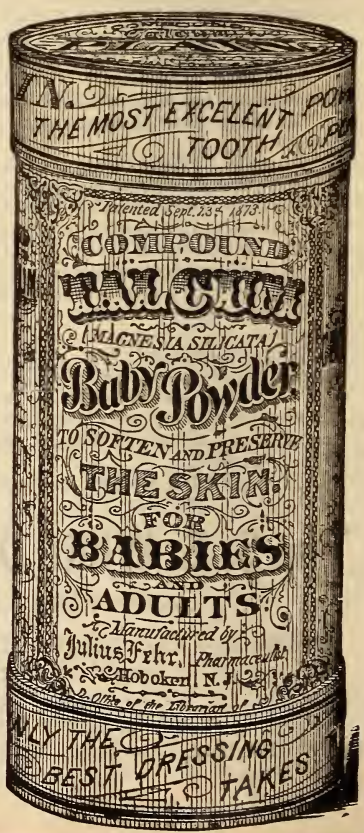

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He has found that the phenic salt exercises an analgesic action much more persistent than that of the muriate, while the chances of producing toxic effects are much less. Gluck was accustomed to add carbolic acid to his solutions of cocaine for the purpose of diminishing the chances of producing disagreeable results. These properties and advantages are explained by the fact that the phenic salt is almost entirely insoluble in water. Not being dissolved by the juices of the organism, the phenate of cocaine, employed as a local application, is absorbed but little or not at all, whence the absence of intoxication and the persistence of the analgesic action, which may last as long as thirty-six hours. Phenate of cocaine may be given internally as well as in hypodermic injection.—*La Semaine Med.*

GALLACETOPHENONE, A NEW DERMATO-THERAPEUTIC AGENT.

BY HERMANN GOLDENBERG, M. D.

It is well known that pyrogallic acid is by no means a harmless drug. After its introduction into dermatological practice NEISSER lost a patient after one application. The patient died on the third day with symptoms of intoxication. VIDAL has likewise reported the death of a patient, eighteen years old, who had used a ten per cent. pyrogallic ointment for two weeks. This poisonous effect of pyrogallic acid is to be attributed to the great readiness with which it is oxidized in alkaline solutions (being so intensely reducing).

Gallacetophenone does not possess this quality and is absolutely harmless, as has been proven by experiments on animals.

It displays strong antiseptic qualities. A one per cent. solution added to chopped meat prevented its becoming putrid for twenty-one days, and destroyed the *Streptococcus aureus* within twenty-four hours.

Since the middle of October I have employed it, both in private and in dispensary practice, on at least thirty patients suffering from various skin diseases.

On account of its resemblance to pyrogallic acid, it seemed to be indicated in psoriasis. I have been so much more inclined to use it in that disease, since VON REKOWSKI, who tried it in a few cases only, maintains "that the effect of this new preparation (used as a ten per cent. ointment) is noticed within twelve hours."

Altogether, I have thus employed it in twelve cases of psoriasis—in all of them with good results. Within a few days the patches became paler and thinner, the desquamation ceased or became less, and involution took place in the centers. Usually after the lapse of from ten to twelve days only a slight hyperæmia was left. Within from two to three weeks the patches disappeared entirely without leaving any pigmentation.

A ten per cent. ointment did not produce any marked irritation or discolor the skin. It stains the clothes slightly yellowish, much less than pyrogallic acid or chrysarobin. In the case of psoriasis of the face and scalp it really acted like a specific. The eruption, which was quite profuse, disappeared within five days, A ten per cent. ointment was applied twice daily. There was no other treatment

Another patient with a universal psoriasis of sixteen years' standing, who applied to my department at Mount Sinai Dispensary for some other trouble, was induced to use a ten per cent. salve of gallacetophenone for the forehead and scalp, which were thickly covered with psoriatic patches. When he returned, two weeks later, there was nothing left but a pigmentation of the forehead, while the psoriasis of the body which had not been treated was *in statu quo ante.*

My friend, DR. G. T. ELLIOT, has, at my request, used gallacetophenone on a patient with psoriasis of eight years' standing, distributed over the trunk, knees, elbows, scalp, and face in patches of various sizes. The case had been under treatment the whole time and had proved exceedingly rebellious. Arsenic caused an increase of inflammatory symptoms. Pyrogallic acid had been used with but moderate success. Chysarobin did well, if used persistently. At the time (November 21st) when the use of a ten per cent. gallacetophenone ointment was begun, the patches were bright red, burning, and with abundant desquamation. A week later the patches were paler and breaking up into small papules. The centers had undergone involution and the desquamation was very little Under the further use the improvement continued. DR. ELLIOT concludes his report with the following words: "From this slight experience, gallacetophenone appears to me to promise to be the most satisfactory local remedy for psoriasis and superior to all others. It produces no inflammatory reaction or pigmentation, but seems to influence immediately the lesions."

From my experience, I feel justified in recommending gallacetophenone as an excellent remedy for psoriasis, for it acts in some cases more promptly than chrysarobin—in all the cases which I have treated, as well if not better than the other remedies at our disposal. As it is harmless and does not discolor the skin or hair, I hope it will be found to be one of the best local remedies for psoriasis of the body, face, and scalp.

My results in a number of cases of eczema psoriti-forme and seborrhoicum have been so gratifying and encouraging that I should like to include these affections in its field of usefulness.—*N. Y. Med. Jour.*

JULIA W. CARPENTER, M. D., (*Cinn. Lancet Clinic*), also speaks of the rapid, almost specific, action of GALLACETOPHENONE in a very rebellious case of psoriasis.

FULL NOTES SENT ON REQUEST.

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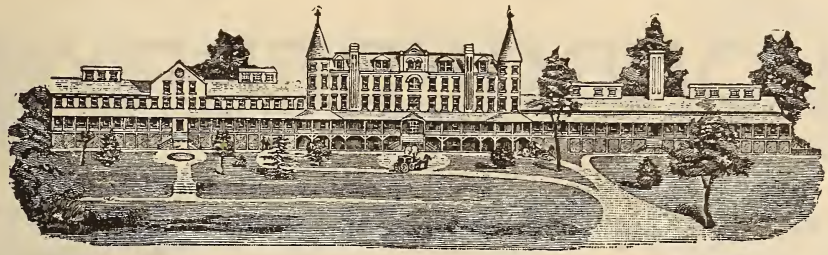

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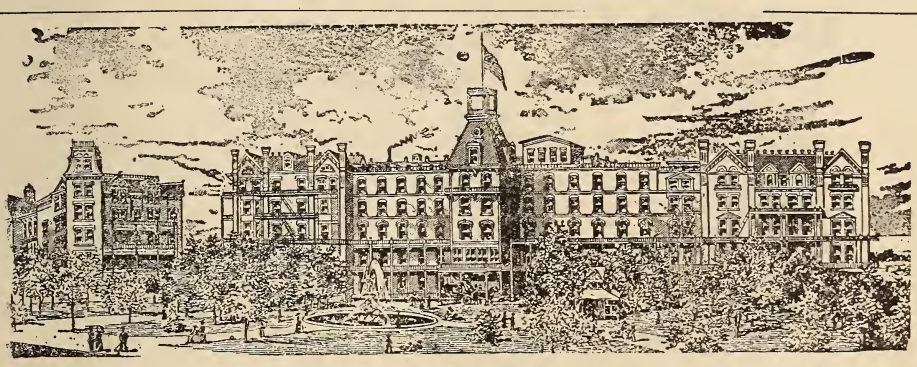

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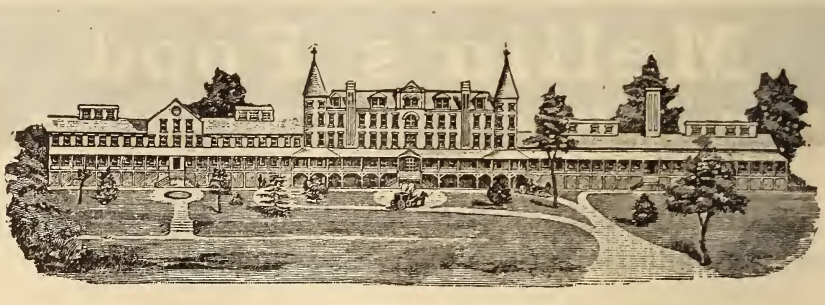

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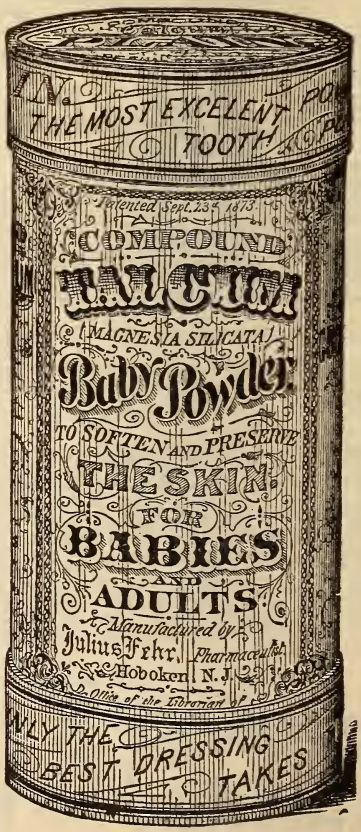

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He has found that the phenic salt exercises an analgesic action much more persistent than that of the muriate, while the chances of producing toxic effects are much less. Gluck was accustomed to add carbolic acid to his solutions of cocaine for the purpose of diminishing the chances of producing disagreeable results. These properties and advantages are explained by the fact that the phenic salt is almost entirely insoluble in water. Not being dissolved by the juices of the organism, the phenate of cocaine, employed as a local application, is absorbed but little or not at all, whence the absence of intoxication and the persistence of the analgesic action, which may last as long as thirty-six hours. Phenate of cocaine may be given internally as well as in hypodermic injection.—*La Semaine Med.*

GALLACETOPHENONE,

A NEW DERMATO-THERAPEUTIC AGENT.

BY HERMANN GOLDENBERG, M. D.

It is well known that pyrogallic acid is by no means a harmless drug. After its introduction into dermatological practice NEISSER lost a patient after one application. The patient died on the third day with symptoms of intoxication. VIDAL has likewise reported the death of a patient, eighteen years old, who had used a ten per cent. pyrogallic ointment for two weeks. This poisonous effect of pyrogallic acid is to be attributed to the great readiness with which it is oxidized in alkaline solutions (being so intensely reducing).

Gallacetophenone does not possess this quality and is absolutely harmless, as has been proven by experiments on animals.

It displays strong antiseptic qualities. A one per cent. solution added to chopped meat prevented its becoming putrid for twenty-one days, and destroyed the *Streptococcus aureus* within twenty-four hours.

Since the middle of October I have employed it, both in private and in dispensary practice, on at least thirty patients suffering from various skin diseases.

On account of its resemblance to pyrogallic acid, it seemed to be indicated in psoriasis. I have been so much more inclined to use it in that disease, since VON REKOWSKI, who tried it in a few cases only, maintains "that the effect of this new preparation (used as a ten per cent. ointment) is noticed within twelve hours."

Altogether, I have thus employed it in twelve cases of psoriasis—in all of them with good results. Within a few days the patches became paler and thinner, the desquamation ceased or became less, and involution took place in the centers. Usually after the lapse of from ten to twelve days only a slight hyperæmia was left. Within from two to three weeks the patches disappeared entirely without leaving any pigmentation.

A ten per cent. ointment did not produce any marked irritation or discolor the skin. It stains the clothes slightly yellowish, much less than pyrogallic acid or chrysarobin. In the case of psoriasis of the face and scalp it really acted like a specific. The eruption, which was quite profuse, disappeared within five days. A ten per cent. ointment was applied twice daily. There was no other treatment

Another patient with a universal psoriasis of sixteen years' standing, who applied to my department at Mount Sinai Dispensary for some other trouble, was induced to use a ten per cent. salve of gallacetophenone for the forehead and scalp, which were thickly covered with psoriatic patches. When he returned, two weeks later, there was nothing left but a pigmentation of the forehead, while the psoriasis of the body which had not been treated was *in statu quo ante.*

My friend, DR. G.T. ELLIOT, has, at my request, used gallacetophenone on a patient with psoriasis of eight years' standing, distributed over the trunk, knees, elbows, scalp, and face in patches of various sizes. The case had been under treatment the whole time and had proved exceedingly rebellious. Arsenic caused an increase of inflammatory symptoms. Pyrogallic acid had been used with but moderate success. Chysarobin did well, if used persistently. At the time (November 21st) when the use of a ten per cent. gallacetophenone ointment was begun, the patches were bright red, burning, and with abundant desquamation. A week later the patches were paler and breaking up into small papules. The centers had undergone involution and the desquamation was very little Under the further use the improvement continued. DR. ELLIOT concludes his report with the following words: "From this slight experience, gallacetophenone appears to me to promise to be the most satisfactory local remedy for psoriasis and superior to all others. It produces no inflammatory reaction or pigmentation, but seems to influence immediately the lesions."

From my experience, I feel justified in recommending gallacetophenone as an excellent remedy for psoriasis, for it acts in some cases more promptly than chrysarobin—in all the cases which I have treated, as well if not better than the other remedies at our disposal. As it is harmless and does not discolor the skin or hair, I hope it will be found to be one of the best local remedies for psoriasis of the body, face, and scalp.

My results in a number of cases of eczema psoriti-forme and seborrhoicum have been so gratifying and encouraging that I should like to include these affections in its field of usefulness.—*N. Y. Med. Jour.*

JULIA W. CARPENTER, M. D., (*Cinn. Lancet Clinic*), also speaks of the rapid, almost specific, action of GALLACETOPHENONE in a very rebellious case of psoriasis.

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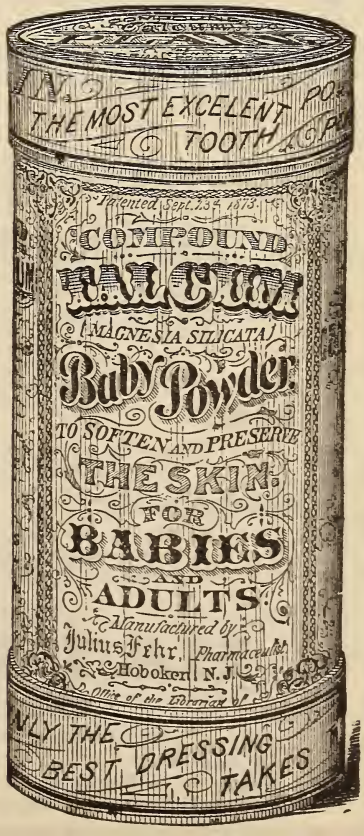

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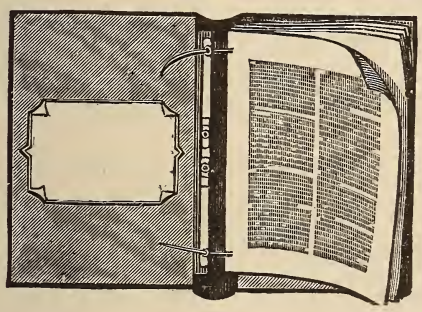

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BY HERMANN GOLDENBERG, M. D.

It is well known that pyrogallic acid is by no means a harmless drug. After its introduction into dermatological practice NEISSER lost a patient after one application. The patient died on the third day with symptoms of intoxication. VIDAL has likewise reported the death of a patient eighteen years old, who had used a ten per cent. pyrogallic ointment for two weeks. This poisonous effect of pyrogallic acid is to be attributed to the great readiness with which it is oxidized in alkaline solutions (being so intensely reducing).

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Since the middle of October I have employed it, both in private and in dispensary practice, on at least thirty patients suffering from various skin diseases.

On account of its resemblance to pyrogallic acid, it seemed to be indicated in psoriasis. I have been so much more inclined to use it in that disease, since VON REKOWSKI, who tried it in a few cases only, maintains "that the effect of this new preparation (used as a ten per cent. ointment) is noticed within twelve hours."

Altogether, I have thus employed it in twelve cases of psoriasis—in all of them with good results. Within a few days the patches became paler and thinner, the desquamation ceased or became less, and involution took place in the centers. Usually after the lapse of from ten to twelve days only a slight hyperæmia was left. Within from two to three weeks the patches disappeared entirely without leaving any pigmentation.

A ten per cent. ointment did not produce any marked irritation or discolor the skin. It stains the clothes slightly yellowish, much less than pyrogallic acid or chrysarobin. In the case of psoriasis of the face and scalp it really acted like a specific. The eruption, which was quite profuse, disappeared within five days. A ten per cent. ointment was applied twice daily. There was no other treatment.

Another patient with a universal psoriasis of sixteen years' standing, who applied to my department at Mount Sinai Dispensary for some other trouble, was induced to use a ten per cent. salve of gallacetophenone for the forehead and scalp, which were thickly covered with psoriatic patches. When he returned, two weeks later, there was nothing left but a pigmentation of the forehead, while the psoriasis of the body which had not been treated was *in statu quo ante.*

My friend, DR. G.T. ELLIOT, has, at my request, used gallacetophenone on a patient with psoriasis of eight years' standing, distributed over the trunk, knees, elbows, scalp, and face in patches of various sizes. The case had been under treatment the whole time and had proved exceedingly rebellious. Arsenic caused an increase of inflammatory symptoms. Pyrogallic acid had been used with but moderate success. Chrysarobin did well, if used persistently. At the time (November 21st) when the use of a ten per cent. gallacetophenone ointment was begun, the patches were bright red, burning, and with abundant desquamation. A week later the patches were paler and breaking up into small papules. The centers had undergone involution and the desquamation was very little. Under the further use the improvement continued. DR. ELLIOT concludes his report with the following words: "From this slight experience, gallacetophenone appears to me to promise to be the most satisfactory local remedy for psoriasis and superior to all others. It produces no inflammatory reaction or pigmentation, but seems to influence immediately the lesions."

From my experience, I feel justified in recommending gallacetophenone as an excellent remedy for psoriasis, for it acts in some cases more promptly than chrysarobin—in all the cases which I have treated, as well if not better than the other remedies at our disposal. As it is harmless and does not discolor the skin or hair, I hope it will be found to be one of the best local remedies for psoriasis of the body, face, and scalp.

My results in a number of cases of eczema psoriti-forme and seborrhoicum have been so gratifying and encouraging that I should like to include these affections in its field of usefulness.—*N. Y. Med. Jour.*

JULIA W. CARPENTER, M. D., (*Cinn. Lancet Clinic*), also speaks of the rapid, almost specific, action of GALLACETOPHENONE in a very rebellious case of psoriasis.

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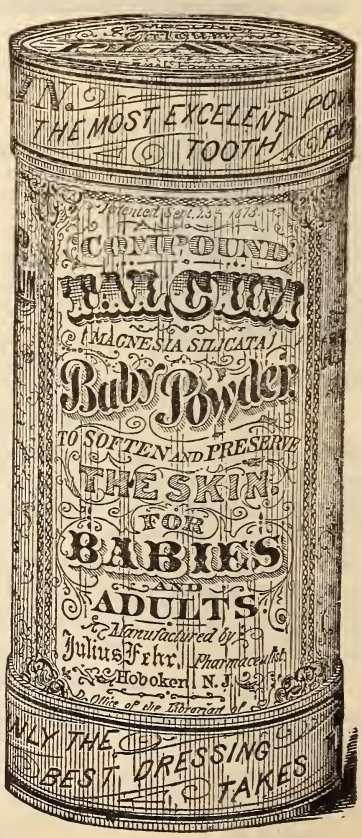

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BY HERMANN GOLDENBERG, M. D.

It is well known that pyrogallic acid is by no means a harmless drug. After its introduction into dermatological practice NEISSER lost a patient after one application. The patient died on the third day with symptoms of intoxication. VIDAL has likewise reported the death of a patient, eighteen years old, who had used a ten per cent. pyrogallic ointment for two weeks. This poisonous effect of pyrogallic acid is to be attributed to the great readiness with which it is oxidized in alkaline solutions (being so intensely reducing).

Gallacetophenone does not possess this quality and is absolutely harmless, as has been proven by experiments on animals.

It displays strong antiseptic qualities. A one per cent. solution added to chopped meat prevented its becoming putrid for twenty-one days, and destroyed the *Streptococcus aureus* within twenty-four hours.

Since the middle of October I have employed it, both in private and in dispensary practice, on at least thirty patients suffering from various skin diseases.

On account of its resemblance to pyrogallic acid, it seemed to be indicated in psoriasis. I have been so much more inclined to use it in that disease, since VON REKOWSKI, who tried it in a few cases only, maintains "that the effect of this new preparation (used as a ten per cent. ointment) is noticed within twelve hours."

Altogether, I have thus employed it in twelve cases of psoriasis—in all of them with good results. Within a few days the patches became paler and thinner, the desquamation ceased or became less, and involution took place in the centers. Usually after the lapse of from ten to twelve days only a slight hyperæmia was left. Within from two to three weeks the patches disappeared entirely without leaving any pigmentation.

A ten per cent. ointment did not produce any marked irritation or discolor the skin. It stains the clothes slightly yellowish, much less than pyrogallic acid or chrysarobin. In the case of psoriasis of the face and scalp it really acted like a specific. The eruption, which was quite profuse, disappeared within five days, A ten per cent. ointment was applied twice daily. There was no other treatment

Another patient with a universal psoriasis of sixteen years' standing, who applied to my department at Mount Sinai Dispensary for some other trouble, was induced to use a ten per cent. salve of gallacetophenone for the forehead and scalp, which were thickly covered with psoriatic patches. When he returned, two weeks later, there was nothing left but a pigmentation of the forehead, while the psoriasis of the body which had not been treated was *in statu quo ante.*

My friend, DR. G.T. ELLIOT, has, at my request, used gallacetophenone on a patient with psoriasis of eight years' standing, distributed over the trunk, knees, elbows, scalp, and face in patches of various sizes. The case had been under treatment the whole time and had proved exceedingly rebellious. Arsenic caused an increase of inflammatory symptoms. Pyrogallic acid had been used with but moderate success. Chysarobin did well, if used persistently. At the time (November 21st) when the use of a ten per cent. gallacetophenone ointment was begun, the patches were bright red, burning, and with abundant desquamation. A week later the patches were paler and breaking up into small papules. The centers had undergone involution and the deqsuamation was very little Under the further use the improvement continued. DR. ELLIOT concludes his report with the following words: "From this slight experience, gallacetophenone appears to me to promise to be the most satisfactory local remedy for psoriasis and superior to all others. It produces no inflammatory reaction or pigmentation, but seems to influence immediately the lesions."

From my experience, I feel justified in recommending gallacetophenone as an excellent remedy for psoriasis, for it acts in some cases more promptly than chrysarobin—in all the cases which I have treated, as well if not better than the other remedies at our disposal. As it is harmless and does not discolor the skin or hair, I hope it will be found to be one of the best local remedies for psoriasis of the body, face, and scalp.

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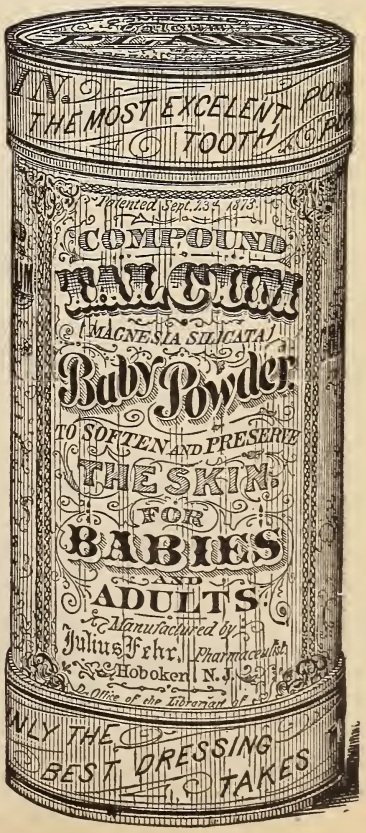

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He has found that the phenic salt exercises an analgesic action much more persistent than that of the muriate, while the chances of producing toxic effects are much less. Gluck was accustomed to add carbolic acid to his solutions of cocaine for the purpose of diminishing the chances of producing disagreeable results. These properties and advantages are explained by the fact that the phenic salt is almost entirely insoluble in water. Not being dissolved by the juices of the organism, the phenate of cocaine, employed as a local application, is absorbed but little or not at all, whence the absence of intoxication and the persistence of the analgesic action, which may last as long as thirty-six hours. Phenate of cocaine may be given internally as well as in hypodermic injection.—*La Semaine Med.*

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It is well known that pyrogallic acid is by no means a harmless drug. After its introduction into dermatological practice NEISSER lost a patient after one application. The patient died on the third day with symptoms of intoxication. VIDAL has likewise reported the death of a patient, eighteen years old, who had used a ten per cent. pyrogallic ointment for two weeks. This poisonous effect of pyrogallic acid is to be attributed to the great readiness with which it is oxidized in alkaline solutions (being so intensely reducing).

Gallacetophenone does not possess this quality and is absolutely harmless, as has been proven by experiments on animals.

It displays strong antiseptic qualities. A one per cent. solution added to chopped meat prevented its becoming putrid for twenty-one days, and destroyed the *Streptococcus aureus* within twenty-four hours.

Since the middle of October I have employed it, both in private and in dispensary practice, on at least thirty patients suffering from various skin diseases.

On account of its resemblance to pyrogallic acid, it seemed to be indicated in psoriasis. I have been so much more inclined to use it in that disease, since VON REKOWSKI, who tried it in a few cases only, maintains "that the effect of this new preparation (used as a ten per cent. ointment) is noticed within twelve hours."

Altogether, I have thus employed it in twelve cases of psoriasis—in all of them with good results. Within a few days the patches became paler and thinner, the desquamation ceased or became less, and involution took place in the centers. Usually after the lapse of from ten to twelve days only a slight hyperæmia was left. Within from two to three weeks the patches disappeared entirely without leaving any pigmentation.

A ten per cent. ointment did not produce any marked irritation or discolor the skin. It stains the clothes slightly yellowish, much less than pyrogallic acid or chrysarobin. In the case of psoriasis of the face and scalp it really acted like a specific. The eruption, which was quite profuse, disappeared within five days, A ten per cent. ointment was applied twice daily. There was no other treatment

Another patient with a universal psoriasis of sixteen years' standing, who applied to my department at Mount Sinai Dispensary for some other trouble, was induced to use a ten per cent. salve of gallacetophenone for the forehead and scalp, which were thickly covered with psoriatic patches. When he returned, two weeks later, there was nothing left but a pigmentation of the forehead, while the psoriasis of the body which had not been treated was *in statu quo ante.*

My friend, DR. G.T. ELLIOT, has, at my request, used gallacetophenone on a patient with psoriasis of eight years' standing, distributed over the trunk, knees, elbows, scalp, and face in patches of various sizes. The case had been under treatment the whole time and had proved exceedingly rebellious. Arsenic caused an increase of inflammatory symptoms. Pyrogallic acid had been used with but moderate success. Chysarobin did well, if used persistently. At the time (November 21st) when the use of a ten per cent. gallacetophenone ointment was begun, the patches were bright red, burning, and with abundant desquamation. A week later the patches were paler and breaking up into small papules. The centers had undergone involution and the desquamation was very little. Under the further use the improvement continued. DR. ELLIOT concludes his report with the following words: "From this slight experience, gallacetophenone appears to me to promise to be the most satisfactory local remedy for psoriasis and superior to all others. It produces no inflammatory reaction or pigmentation, but seems to influence immediately the lesions."

From my experience, I feel justified in recommending gallacetophenone as an excellent remedy for psoriasis, for it acts in some cases more promptly than chrysarobin—in all the cases which I have treated, as well if not better than the other remedies at our disposal. As it is harmless and does not discolor the skin or hair, I hope it will be found to be one of the best local remedies for psoriasis of the body, face, and scalp.

My results in a number of cases of eczema psoriti-forme and seborrhoicum have been so gratifying and encouraging that I should like to include these affections in its field of usefulness.—*N. Y. Med. Jour.*

JULIA W. CARPENTER, M. D., (*Cinn. Lancet Clinic*), also speaks of the rapid, almost specific, action of GALLACETOPHENONE in a very rebellious case of psoriasis.

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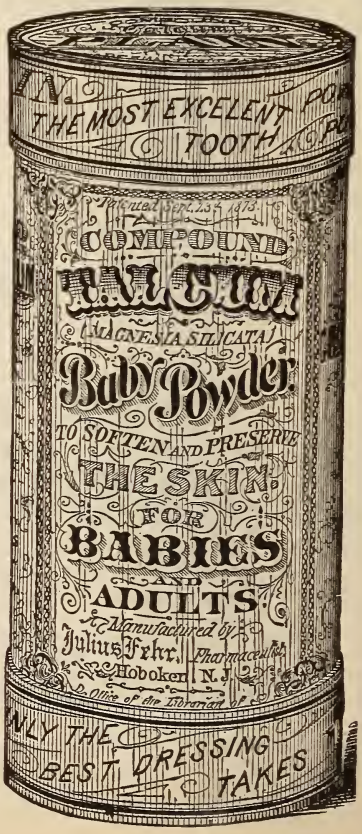

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BY HERMANN GOLDENBERG, M. D.

It is well known that pyrogallic acid is by no means a harmless drug. After its introduction into dermatological practice NEISSER lost a patient after one application. The patient died on the third day with symptoms of intoxication. VIDAL has likewise reported the death of a patient, eighteen years old, who had used a ten per cent. pyrogallic ointment for two weeks. This poisonous effect of pyrogallic acid is to be attributed to the great readiness with which it is oxidized in alkaline solutions (being so intensely reducing).

Gallacetophenone does not possess this quality and is absolutely harmless, as has been proven by experiments on animals.

It displays strong antiseptic qualities. A one per cent. solution added to chopped meat prevented its becoming putrid for twenty-one days, and destroyed the *Streptococcus aureus* within twenty-four hours.

Since the middle of October I have employed it, both in private and in dispensary practice, on at least thirty patients suffering from various skin diseases.

On account of its resemblance to pyrogallic acid, it seemed to be indicated in psoriasis. I have been so much more inclined to use it in that disease, since VON REKOWSKI, who tried it in a few cases only, maintains "that the effect of this new preparation (used as a ten per cent. ointment) is noticed within twelve hours."

Altogether, I have thus employed it in twelve cases of psoriasis—in all of them with good results. Within a few days the patches became paler and thinner, the desquamation ceased or became less, and involution took place in the centers. Usually after the lapse of from ten to twelve days only a slight hyperæmia was left. Within from two to three weeks the patches disappeared entirely without leaving any pigmentation.

A ten per cent. ointment did not produce any marked irritation or discolor the skin. It stains the clothes slightly yellowish, much less than pyrogallic acid or chrysarobin. In the case of psoriasis of the face and scalp it really acted like a specific. The eruption, which was quite profuse, disappeared within five days. A ten per cent. ointment was applied twice daily. There was no other treatment

Another patient with a universal psoriasis of sixteen years' standing, who applied to my department at Mount Sinai Dispensary for some other trouble, was induced to use a ten per cent. salve of gallacetophenone for the forehead and scalp, which were thickly covered with psoriatic patches. When he returned, two weeks later, there was nothing left but a pigmentation of the forehead, while the psoriasis of the body which had not been treated was *in statu quo ante.*

My friend, DR. G.T. ELLIOT, has, at my request, used gallacetophenone on a patient with psoriasis of eight years' standing, distributed over the trunk, knees, elbows, scalp, and face in patches of various sizes. The case had been under treatment the whole time and had proved exceedingly rebellious. Arsenic caused an increase of inflammatory symptoms. Pyrogallic acid had been used with but moderate success. Chysarobin did well, if used persistently. At the time (November 21st) when the use of a ten per cent. gallacetophenone ointment was begun, the patches were bright red, burning, and with abundant desquamation. A week later the patches were paler and breaking up into small papules. The centers had undergone involution and the desquamation was very little. Under the further use the improvement continued. DR. ELLIOT concludes his report with the following words: "From this slight experience, gallacetophenone appears to me to promise to be the most satisfactory local remedy for psoriasis and superior to all others. It produces no inflammatory reaction or pigmentation, but seems to influence immediately the lesions."

From my experience, I feel justified in recommending gallacetophenone as an excellent remedy for psoriasis, for it acts in some cases more promptly than chrysarobin—in all the cases which I have treated, as well if not better than the other remedies at our disposal. As it is harmless and does not discolor the skin or hair, I hope it will be found to be one of the best local remedies for psoriasis of the body, face, and scalp.

My results in a number of cases of eczema psoriti-forme and seborrhoicum have been so gratifying and encouraging that I should like to include these affections in its field of usefulness.—*N. Y. Med. Jour.*

JULIA W. CARPENTER, M. D., (*Cinn. Lancet Clinic*), also speaks of the rapid, almost specific, action of GALLACETOPHENONE in a very rebellious case of psoriasis.

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He has found that the phenic salt exercises an analgesic action much more persistent than that of the muriate, while the chances of producing toxic effects are much less. Gluck was accustomed to add carbolic acid to his solutions of cocaine for the purpose of diminishing the chances of producing disagreeable results. These properties and advantages are explained by the fact that the phenic salt is almost entirely insoluble in water. Not being dissolved by the juices of the organism, the phenate of cocaine, employed as a local application, is absorbed but little or not at all, whence the absence of intoxication and the persistence of the analgesic action, which may last as long as thirty-six hours. Phenate of cocaine may be given internally as well as in hypodermic injection.—*La Semaine Med.*

GALLACETOPHENONE, A NEW DERMATO-THERAPEUTIC AGENT.

BY HERMANN GOLDENBERG, M. D.

It is well known that pyrogallic acid is by no means a harmless drug. After its introduction into dermatological practice NEISSER lost a patient after one application. The patient died on the third day with symptoms of intoxication. VIDAL has likewise reported the death of a patient, eighteen years old, who had used a ten per cent. pyrogallic ointment for two weeks. This poisonous effect of pyrogallic acid is to be attributed to the great readiness with which it is oxidized in alkaline solutions (being so intensely reducing).

Gallacetophenone does not possess this quality and is absolutely harmless, as has been proven by experiments on animals.

It displays strong antiseptic qualities. A one per cent. solution added to chopped meat prevented its becoming putrid for twenty-one days, and destroyed the *Streptococcus aureus* within twenty-four hours.

Since the middle of October I have employed it, both in private and in dispensary practice, on at least thirty patients suffering from various skin diseases.

On account of its resemblance to pyrogallic acid, it seemed to be indicated in psoriasis. I have been so much more inclined to use it in that disease, since VON REKOWSKI, who tried it in a few cases only, maintains "that the effect of this new preparation (used as a ten per cent. ointment) is noticed within twelve hours."

Altogether, I have thus employed it in twelve cases of psoriasis—in all of them with good results. Within a few days the patches became paler and thinner, the desquamation ceased or became less, and involution took place in the centers. Usually after the lapse of from ten to twelve days only a slight hyperæmia was left. Within from two to three weeks the patches disappeared entirely without leaving any pigmentation.

A ten per cent. ointment did not produce any marked irritation or discolor the skin. It stains the clothes slightly yellowish, much less than pyrogallic acid or chrysarobin. In the case of psoriasis of the face and scalp it really acted like a specific. The eruption, which was quite profuse, disappeared within five days. A ten per cent. ointment was applied twice daily. There was no other treatment

Another patient with a universal psoriasis of sixteen years' standing, who applied to my department at Mount Sinai Dispensary for some other trouble, was induced to use a ten per cent. salve of gallacetophenone for the forehead and scalp, which were thickly covered with psoriatic patches. When he returned, two weeks later, there was nothing left but a pigmentation of the forehead, while the psoriasis of the body which had not been treated was *in statu quo ante.*

My friend, DR. G.T. ELLIOT, has, at my request, used gallacetophenone on a patient with psoriasis of eight years' standing, distributed over the trunk, knees, elbows, scalp, and face in patches of various sizes. The case had been under treatment the whole time and had proved exceedingly rebellious. Arsenic caused an increase of inflammatory symptoms. Pyrogallic acid had been used with but moderate success. Chysarobin did well, if used persistently. At the time (November 21st) when the use of a ten per cent. gallacetophenone ointment was begun, the patches were bright red, burning, and with abundant desquamation. A week later the patches were paler and breaking up into small papules. The centers had undergone involution and the desquamation was very little Under the further use the improvement continued. DR. ELLIOT concludes his report with the following words: "From this slight experience, gallacetophenone appears to me to promise to be the most satisfactory local remedy for psoriasis and superior to all others. It produces no inflammatory reaction or pigmentation, but seems to influence immediately the lesions."

From my experience, I feel justified in recommending gallacetophenone as an excellent remedy for psoriasis, for it acts in some cases more promptly than chrysarobin—in all the cases which I have treated, as well if not better than the other remedies at our disposal. As it is harmless and does not discolor the skin or hair, I hope it will be found to be one of the best local remedies for psoriasis of the body, face, and scalp.

My results in a number of cases of eczema psoriti-forme and seborrhoicum have been so gratifying and encouraging that I should like to include these affections in its field of usefulness.—*N. Y. Med. Jour.*

JULIA W. CARPENTER, M. D., (*Cinn. Lancet Clinic*), also speaks of the rapid, almost specific, action of GALLACETOPHENONE in a very rebellious case of psoriasis.

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Or, the person may not be able to think as quickly as he should. To test this, ask the patient three simple questions in rapid succession, as, Where were you just before you came into this room? What were you doing? How long did you remain? The rapidity with which the answers are given indicate the rapidity of brain action.

All these things show that it is of the utmost importance that the nervous system should be kept in tone. Otherwise, every part of the body languishes.

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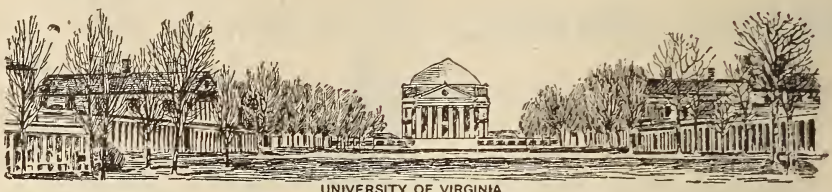

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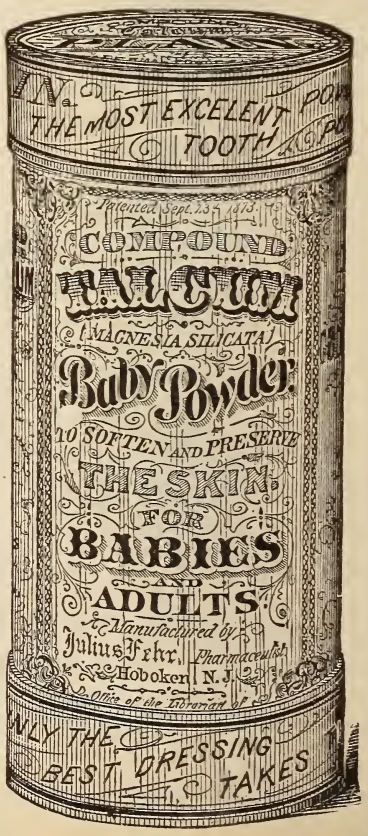

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Peroxide of hydrogen was discovered and described in the year 1818 by the illustrious French chemist, Baron THENARD. B. W. RICHARDSON, M. D., (*Asclepiad*) says: "In 1860 I made my first report to the Medical Society of London, and, in 1862, I made a second report on the medicinal use of the peroxide. I had by this time used it in two hundred and twenty-three cases of disease, including phthisis, diabetes, anæmia, sub-acute and chronic rheumatism, strumous enlargement of the cervical glands, mesenteric disease, pertussis, chronic bronchitis, chronic laryngitis, mitral disease, and dyspepsia. In epitome of results I drew the conclusions: That in diabetes the peroxide reduced the specific gravity of the urine, while it rather increased the quantity: that in chronic and sub-acute rheumatism is afforded relief; that in valvular disease of the heart with pulmonary congestion it gave relief to the dyspnœa; that in mesenteric disease; and in jaundice it caused an improvement in the digestion; that in pertussis its effect for good was very remarkable, since it cut short the paroxysms of cough, and seemed decidedly to shorten the period of the disease; that in chronic bronchitis it lessened the dyspnœa, and rendered the expectorated matter less tenacious; that in chronic laryngitis it gave pain on being swallowed, and did not appear to be useful; that in anæmia it did not of itself render any service but favored the good effect of iron; that in the first stage of phthisis it caused improvement in the digestion, and in the later stages gave unquestionable and even wonderful relief to the breathlessness and oppression, acting, in fact, like an opiate without narcotism, and assisting oxidation.

In the discussion which followed upon the reading of this paper I was warmly supported in several points by Drs. GIBBON, SYMES, THOMPSON, and GIBB. all of whom had been prescribing the peroxide on the suggestion made in my previous paper of 1860. Dr. GIBB bore special testimony to its value in affording relief during the last stage of phthisis, for which I had recommended it in the case of a member of his own family. But the most important new observation I had to communicate to the Society in 1862 was that in free and frequently repeated doses the peroxide could be made to produce a modified salivation. a fact which led to two suggestions; firstly, that in the use of mercurial and iodide preparations it was the chlorine or iodine in them which caused the ptyalism; secondly, that the peroxide would be a good substitute for mercury and the iodides in the treatment of syphilis.

In testing the action of the peroxide on natural organic structures which liberate oxygen from it, I observed, as related above, that the fluid oxygen causes, in some instances, decomposition of the organic matter. The same fact was observed with abnormal organic material like pus. When pus is placed for observation under the microscope. mixed with the neutral peroxide solution, the phenomena are most interesting. The pus corpuscles are, for a time, driven about as if they were alive. They move in all directions, assume ovoid shapes as they squeeze through masses that may obstruct their course, and after many variations of form and movement come to a standstill, like amorphous matter, dead, so to speak, and entirely disorganized. This effect of the peroxide in destroying pus cells led me very early in these researches to use the solution for the treatment of suppurating surfaces, and with great success."

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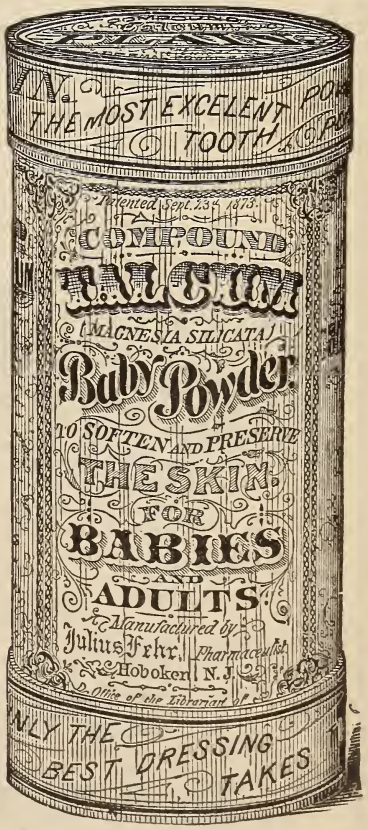

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He has found that the phenic salt exercises an analgesic action much more persistent than that of the muriate, while the chances of producing toxic effects are much less. Gluck was accustomed to add carbolic acid to his solutions of cocaine for the purpose of diminishing the chances of producing disagreeable results. These properties and advantages are explained by the fact that the phenic salt is almost entirely insoluble in water. Not being dissolved by the juices of the organism, the phenate of cocaine, employed as a local application, is absorbed but little or not at all, whence the absence of intoxication and the persistence of the analgesic action, which may last as long as thirty-six hours. Phenate of cocaine may be given internally as well as in hypodermic injection.—*La Semaine Med.*

GALLACETOPHENONE, A NEW DERMATO-THERAPEUTIC AGENT.

BY HERMANN GOLDENBERG, M. D.

It is well known that pyrogallic acid is by no means a harmless drug. After its introduction into dermatological practice NEISSER lost a patient after one application. The patient died on the third day with symptoms of intoxication. VIDAL has likewise reported the death of a patient, eighteen years old, who had used a ten per cent. pyrogallic ointment for two weeks. This poisonous effect of pyrogallic acid is to be attributed to the great readiness with which it is oxidized in alkaline solutions (being so intensely reducing).

Gallacetophenone does not possess this quality and is absolutely harmless, as has been proven by experiments on animals.

It displays strong antiseptic qualities. A one per cent. solution added to chopped meat prevented its becoming putrid for twenty-one days, and destroyed the *Streptococcus aureus* within twenty-four hours.

Since the middle of October I have employed it, both in private and in dispensary practice, on at least thirty patients suffering from various skin diseases.

On account of its resemblance to pyrogallic acid, it seemed to be indicated in psoriasis. I have been so much more inclined to use it in that disease, since VON REKOWSKI, who tried it in a few cases only, maintains "that the effect of this new preparation (used as a ten per cent. ointment) is noticed within twelve hours."

Altogether, I have thus employed it in twelve cases of psoriasis—in all of them with good results. Within a few days the patches became paler and thinner, the desquamation ceased or became less, and involution took place in the centers. Usually after the lapse of from ten to twelve days only a slight hyperæmia was left. Within from two to three weeks the patches disappeared entirely without leaving any pigmentation.

A ten per cent. ointment did not produce any marked irritation or discolor the skin. It stains the clothes slightly yellowish, much less than pyrogallic acid or chrysarobin. In the case of psoriasis of the face and scalp it really acted like a specific. The eruption, which was quite profuse, disappeared within five days. A ten per cent. ointment was applied twice daily. There was no other treatment

Another patient with a universal psoriasis of sixteen years' standing, who applied to my department at Mount Sinai Dispensary for some other trouble, was induced to use a ten per cent. salve of gallacetophenone for the forehead and scalp, which were thickly covered with psoriatic patches. When he returned, two weeks later, there was nothing left but a pigmentation of the forehead, while the psoriasis of the body which had not been treated was *in statu quo ante.*

My friend, DR. G.T. ELLIOT, has, at my request, used gallacetophenone on a patient with psoriasis of eight years' standing, distributed over the trunk, knees, elbows, scalp, and face in patches of various sizes. The case had been under treatment the whole time and had proved exceedingly rebellious. Arsenic caused an increase of inflammatory symptoms. Pyrogallic acid had been used with but moderate success. Chysarobin did well, if used persistently. At the time (November 21st) when the use of a ten per cent. gallacetophenone ointment was begun, the patches were bright red, burning, and with abundant desquamation. A week later the patches were paler and breaking up into small papules. The centers had undergone involution and the desquamation was very little Under the further use the improvement continued. DR. ELLIOT concludes his report with the following words: "From this slight experience, gallacetophenone appears to me to promise to be the most satisfactory local remedy for psoriasis and superior to all others. It produces no inflammatory reaction or pigmentation, but seems to influence immediately the lesions."

From my experience, I feel justified in recommending gallacetophenone as an excellent remedy for psoriasis, for it acts in some cases more promptly than chrysarobin—in all the cases which I have treated, as well if not better than the other remedies at our disposal. As it is harmless and does not discolor the skin or hair, I hope it will be found to be one of the best local remedies for psoriasis of the body, face, and scalp.

My results in a number of cases of eczema psoritiforme and seborrhoicum have been so gratifying and encouraging that I should like to include these affections in its field of usefulness.—*N. Y. Med. Jour.*

JULIA W. CARPENTER, M. D., (*Cinn. Lancet Clinic*), also speaks of the rapid, almost specific, action of GALLACETOPHENONE in a very rebellious case of psoriasis.

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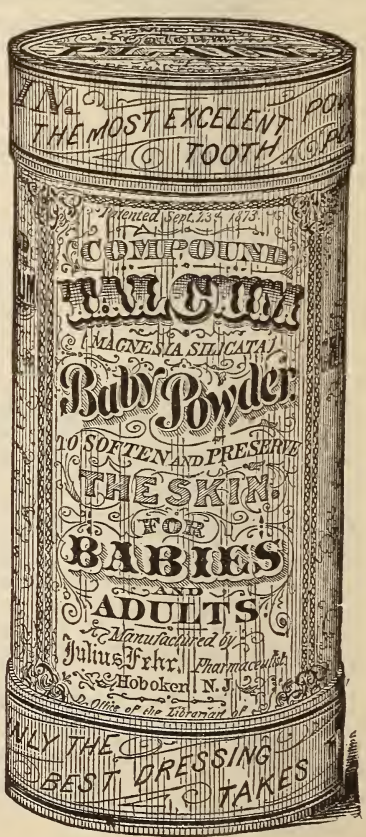

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Peroxide of hydrogen was discovered and described in the year 1818 by the illustrious French chemist, Baron THENARD. B. W. RICHARDSON, M. D., (*Asclepiad*) says: "In 1860 I made my first report to the Medical Society of London, and, in 1862, I made a second report on the medicinal use of the peroxide. I had by this time used it in two hundred and twenty-three cases of disease, including phthisis, diabetes, anæmia, sub-acute and chronic rheumatism, strumous enlargement of the cervical glands, mesenteric disease, pertussis, chronic bronchitis, chronic laryngitis, mitral disease, and dyspepsia. In epitome of results I drew the conclusions: That in diabetes the peroxide reduced the specific gravity of the urine, while it rather increased the quantity: that in chronic and sub-acute rheumatism is afforded relief; that in valvular disease of the heart with pulmonary congestion it gave relief to the dyspnœa; that in mesenteric disease; and in jaundice it caused an improvement in the digestion; that in pertussis its effect for good was very remarkable, since it cut short the paroxysms of cough, and seemed decidedly to shorten the period of the disease; that in chronic bronchitis it lessened the dyspnœa, and rendered the expectorated matter less tenacious; that in chronic laryngitis it gave pain on being swallowed, and did not appear to be useful; that in anæmia it did not of itself render any service but favored the good effect of iron; that in the first stage of phthisis it caused improvement in the digestion, and in the later stages gave unquestionable and even wonderful relief to the breathlessness and oppression, acting, in fact, like an opiate without narcotism, and assisting oxidation.

In the discussion which followed upon the reading of this paper I was warmly supported in several points by Drs. GIBBON, SYMES, THOMPSON, and GIBB, all of whom had been prescribing the peroxide on the suggestion made in my previous paper of 1860. Dr. GIBB bore special testimony to its value in affording relief during the last stage of phthisis, for which I had recommended it in the case of a member of his own family. But the most important new observation I had to communicate to the Society in 1862 was that in free and frequently repeated doses the peroxide could be made to produce a modified salivation. a fact which led to two suggestions: firstly, that in the use of mercurial and iodide preparations it was the chlorine or iodine in them which caused the ptyalism; secondly, that the peroxide would be a good substitute for mercury and the iodides in the treatment of syphilis.

In testing the action of the peroxide on natural organic structures which liberate oxygen from it, I observed, as related above, that the fluid oxygen causes, in some instances, decomposition of the organic matter. The same factwas observed with abnormal organic material like pus. When pus is placed for observation under the microscope, mixed with the neutral peroxide solution, the phenomena are most interesting. The pus corpuscles are, for a time, driven about as if they were alive. They move in all directions, assume ovoid shapes as they squeeze through masses that may obstruct their course, and after many variations of form and movement come to a standstill, like amorphous matter, dead, so to speak, and entirely disorganized. This effect of the peroxide in destroying pus cells led me very early in these researches to use the solution for the treatment of suppurating surfaces, and with great success."

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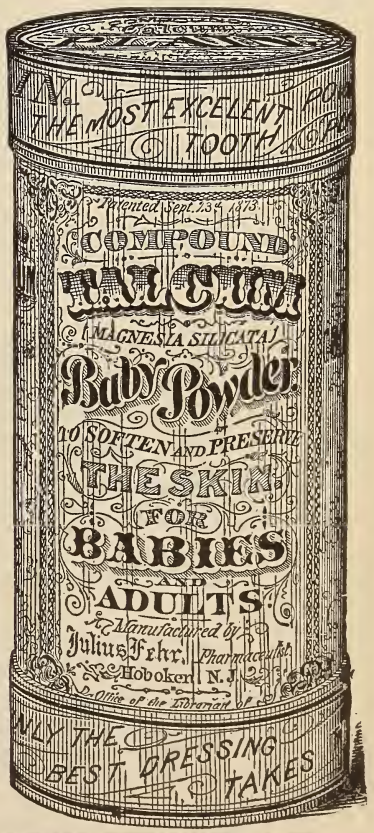

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